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PRESENTATION.

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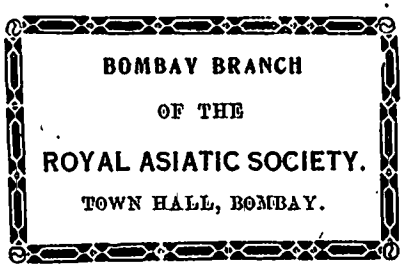

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ENGLISH BOTANY;

OR,

COLOURED FIGURES

OF

BRITISH PLANTS,

WITH THEIR

ESSENTIAL CHARACTERS, SYNONYMS, AND PLACES OF GROWTH.

TO WHICH WILL BE ADDED,

OCCASIONAL REMARKS.

BY

JAMES EDWARD SMITH, M.D. F.R.S.

MEMBER OF THE IMP. ACAD. NATURÆ CURIOSORUM, THE ACADEMIES OF STOCKHOLM, UPSAL, TURIN, LISBON, LUND, BERLIN, PHILADELPHIA, AND THE NAT. HIST. SOCIETY OF PARIS;

PRESIDENT OF THE LINNÆAN SOCIETY.

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ac

THE FIGURES BY

JAMES SOWERBY, F.L.S.

———"VIRESQUE ACQUIRIT EUNDO."——— *Virg.*

JXh1

VOL. XVII.

LONDON:

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Apr.ˡ 1803 Published by Jas. Sowerby, London

OROBUS tuberosus.

Tuberous Orobus.

DIADELPHIA Decandria.

GEN. CHAR. *Style* linear, cylindrical, downy above. *Cal.* blunt at the base, its upper segments deeper and shorter.

SPEC. CHAR. Leaves pinnated, elliptic-lanceolate. Stipulæ half arrow-shaped, toothed at the base. Stem simple, erect.

SYN. Orobus tuberosus, *Linn. Sp. Pl.* 1028. *Sm. Fl. Brit.* 761. *Huds.* 314. *With.* 631. *Hull.* 160. *Sibth.* 221. *Abbot.* 155. *Curt. Lond. fasc.* 1. *t.* 53. *Dicks. H. Sicc. fasc.* 1. 11.

O. sylvaticus, foliis oblongis glabris. *Raii Syn.* 324.

THIS is one of our most elegant papilionaceous plants. It grows chiefly in woods, thickets, and hilly pastures, on a clay or loamy soil. On gravel it is not to be found, and is therefore rare in Norfolk. It flowers in May and June. The various rose tints of the petals, contrasted with the dark purple of the calyx and ripening pods, render it very ornamental.

The roots are perennial, creeping and tuberous. Stems simple, erect, a foot high, leafy, winged, smooth. Leaves alternate, formed of 2, 2½ or 3 pairs of lanceolate, more or less elliptical, entire leaflets, the common stalk projecting beyond them. Their colour is a darkish green. The stipulæ vary in breadth, but are always toothed at the base. Flowers in loose long-stalked axillary clusters. Calyx smooth. Pod cylindrical, pendulous, black when ripe, tipped with the permanent channeled style. Seeds several. The Highlanders are reported to chew the roots like liquorice or tobacco, and sometimes to brew a sort of liquor from them.

The other British *Orobus* may be found in *v.* 8. *t.* 518. We take this opportunity of announcing what we suppose a most unheard of variety of it with simple leaves, five times as large as its natural leaflets, found by Mr. Todd at Hafod. This variety cannot by any culture be made to flower. We are obliged to Sir Joseph Banks for suggesting to what plant it could possibly belong, and we have it in cultivation for further inquiry.

842.

Apl 1. 1803. Published by Jas. Sowerby, London.

STACHYS arvensis.

Corn Woundwort.

DIDYNAMIA Gymnospermia.

GEN. CHAR. *Cal.* 5-cleft, awned. Upper lip of the *corolla* vaulted; lower reflexed at the sides, the large middle segment notched. *Stamina* when old bent outwards.

SPEC. CHAR. Six flowers in a whorl. Stem weak. Leaves heart-shaped, obtuse, crenate, slightly hairy.

SYN. Stachys arvensis. *Linn. Sp. Pl.* 814. *Sm. Fl. Brit.* 634. *Huds.* 260. *With.* 532. *Hull.* 132. *Relh.* 234. *Sibth.* 187. *Curt. Lond. fasc.* 4. *t.* 41. *Dicks. H. Sicc. fasc.* 15. 7.

Sideritis humilis, lato obtuso folio. *Raii Syn.* 242.

COMMON in gravelly, chalky, or light sandy fields, flowering in July and August.

The root is small and annual. Stems spreading, often prostrate, weak, branched, leafy, square, hairy or smooth. Leaves opposite, on short stalks, ovate, or a little heart-shaped, obtuse, crenate, in some degree three-nerved at the base, more or less slightly hairy on both sides. Whorls several, of 6 flowers each. Calyx tubular, hairy, with fringed teeth. Corolla scarcely projecting beyond them, variegated with white and pale purple.

No uses or peculiar properties are ascribed to this herb, nor has it any beauty to boast. It partakes of the disagreeable smell of others of the same genus. As a weed it gives little trouble, though not unfrequent in kitchen gardens on a light soil, being easily eradicated when the first flowers appear.

Antirrhinum Orontium

Apr.l 1803. Published by Ja.s Sowerby, London.

ANTIRRHINUM Orontium.

Lesser Snapdragon.

DIDYNAMIA Angiospermia.

GEN. CHAR. *Cal.* in 5 segments. *Cor.* with a prominence at its base, pointing downwards and bearing honey. *Caps.* 2-celled.

SPEC. CHAR. Corolla not elongated into a spur. Flowers loosely spiked. Calyx finger-shaped, longer than the corolla.

SYN. Antirrhinum Orontium. *Linn. Sp. Pl.* 860. *Sm. Fl. Brit.* 662. *Huds.* 274. *With.* 552. *Hull.* 139. *Curt. Lond. fasc.* 4. *t.* 45. *Dicks. H. Sicc. fasc.* 11. 9.

A. angustifolium sylvestre. *Raii Syn.* *283.

THIS is not an uncommon plant in dry fields on a sandy, gravelly, or chalky soil, so that we are rather surprised to find it not mentioned in any of our three provincial Floras. This specimen was gathered at Battersea by Mr. Groult in July last.

Root annual, small. Herb slightly hairy. Stem erect, branched, round. Leaves alternate, lanceolate, entire. Spikes terminal, solitary, simple, lax, leafy, of several nearly sessile rose-coloured flowers, the deep linear segments of whose calyxes just equal the corolla in length when first expanded, but soon grow much beyond it. The palate of the flower is yellow with white edges. The Rev. Mr. Forby found in Norfolk a variety with a white corolla and violet lips, which remains constant in a garden. The capsule of this *Antirrhinum* exhibits the whimsical resemblance of a monkey's, or perhaps more accurately, a bat's face, when presented in front. The seeds are quadrangular. The calyx and flower-stalk are slightly viscid.

1058.

Hypericum hirsutum.

Ap. 1. 1808. Published by Jas Sowerby, London.

HYPERICUM hirsutum.

Hairy St. John's Wort.

POLYADELPHIA Polyandria.

GEN. CHAR. *Cal.* deeply 5-cleft, inferior. *Pet.* 5. *Filaments* numerous, united at the base into 3 or 5 sets. *Caps.* with many seeds.

SPEC. CHAR. Styles three. Calyx with glandular serratures. Stem erect, round. Leaves ovate, downy.

SYN. Hypericum hirsutum. *Linn. Sp. Pl.* 1105. *Sm. Fl. Brit.* 804. *Huds.* 333. *With.* 666. *Hull.* 168. *Relh.* 295. *Sibth.* 234. *Abbot.* 166. *Curt. Lond. fasc. 3. t.* 49.

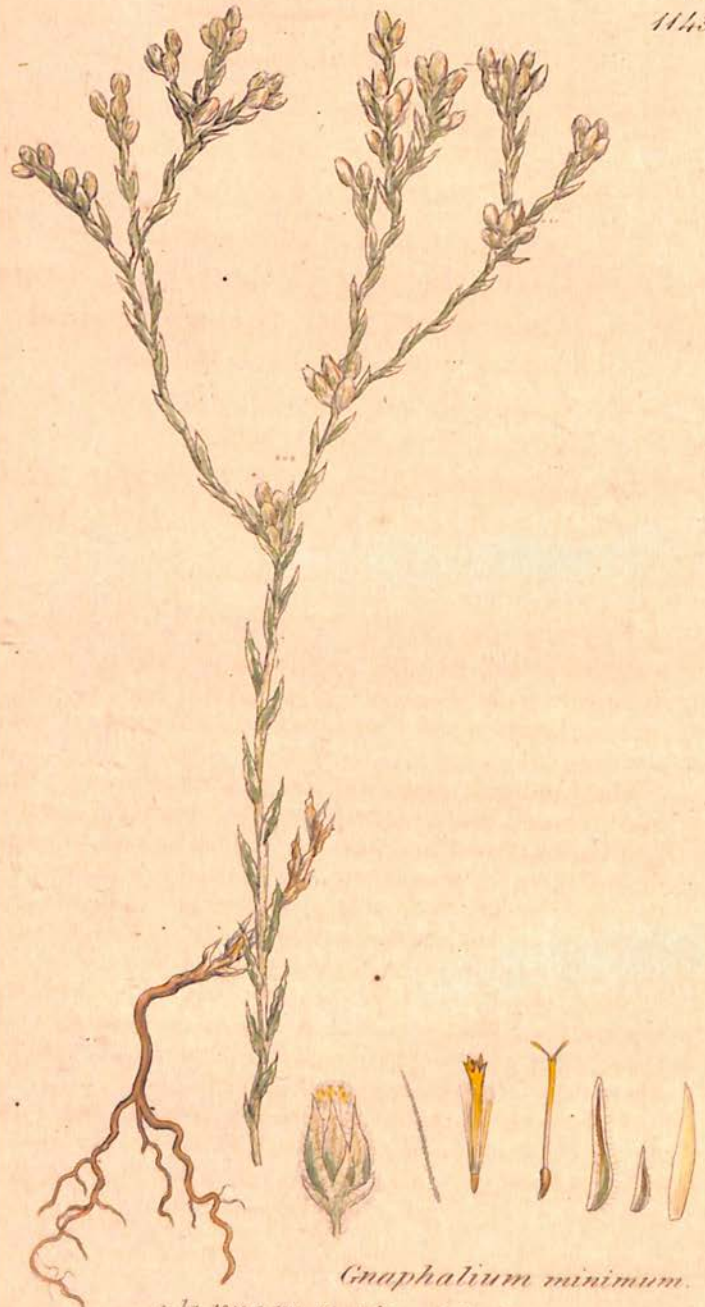
H. Androsæmum dictum. *Raii Syn.* 343.

FOUND chiefly on a calcareous soil, in dry shady places. In June and July, when it blossoms, few of our wild plants make a more elegant appearance; for though its flowers are smaller than those of *H. montanum*, *t.* 371, their profusion makes up for that deficiency; and the rich hues of the stem, herbage, and glandular calyx, particularly where the soil is pure chalk and the situation open, are well contrasted with the golden brilliancy of the petals.

Root perennial, branching. Stems upright, about 2 feet high, round, straight, leafy, more or less clothed with soft hairs, and panicled in the upper part. Leaves ovate, entire, ribbed, hairy, especially underneath. Flowers very numerous. Bracteæ, calyx-leaves, and even the tips of the petals, fringed with blackish viscid pedunculated glands. The plant when rubbed partakes of the aromatic orange-like scent of the other species of *Hypericum*, and probably of their qualities.

"Balm of the warrior's wound, Hypericon,"

as the elegant author of Gondibert calls it, is the more common *H. perforatum*, *t.* 295.



Gnaphalium minimum.

Sp.ª L. 1803 Published by Ja.ª Sowerby London.

GNAPHALIUM minimum.

Least Cudweed.

SYNGENESIA Polygamia-superflua.

GEN. CHAR. *Recept.* naked. *Down* rough or feathery. *Cal.* imbricated; with coloured membranous scales. *Florets* of the radius awl-shaped. Some *florets* of the disk occasionally abortive.

SPEC. CHAR. Stem erect, branched. Leaves lanceolate, acute, flat. Flowers conical, rather clustered, both lateral and terminal.

SYN. Gnaphalium minimum. *Sm. Fl. Brit.* 873. *Raii Syn.* 181. *Relh.* 324.
G. montanum. *Huds.* 362. *With.* 715. *Hull.* 183.
Filago montana. *Sibth.* 262. *Abbot.* 189.

PLENTIFUL on the most barren ground, about the margins of gravel-pits, and other dry sandy places, where it flowers from July to the end of autumn, varying greatly in luxuriance according to the nourishment or moisture it receives.

Root annual, small but tough. Stem erect, a few inches high, round, leafy, a little woolly; slender, simple, and naked below; branched and corymbose above. Leaves alternate, upright, lanceolate, or a little ovate, acute, entire, flat, woolly on both sides. Flowers small, sessile, either scattered or in clusters, axillary or terminal, conical, angular, woolly. Calyx-scales awl-shaped, keeled, membranous at the tip; the inner ones entirely so. Hermaphrodite florets from 4 to 8, tubular, regularly 5-cleft, yellow: female ones slender, filiform: all producing perfect seed. Down rough. Receptacle tuberculated.

Former writers have mistaken this for the *Filago montana* of Linnæus, a plant not found in Britain, which is twice as large in all its parts and much more woolly, as appears by the Linnæan Herbarium.

April 1803. Published by J. Sowerby, London.

ERIGERON acre.

Blue Flea-bane.

SYNGENESIA Polygamia-superflua.

GEN. CHAR. *Recept.* naked. *Down* simple. Florets of the radius linear, very narrow, numerous. *Cal.* imbricated.

SPEC. CHAR. Stem racemose. Stalks mostly single-flowered. Leaves lanceolate or tongue-shaped, sessile.

SYN. Erigeron acre. *Linn. Sp. Pl.* 1211. *Sm. Fl. Brit.* 877. *Huds.* 363. *With.* 718. *Hull.* 185. *Relh.* 325. *Sibth.* 252. *Abbot.* 181. *Curt. Lond. fasc.* 1. *t.* 60.

Aster arvensis cæruleus acris. *Raii Syn.* 175.

THIS, like the *Gnaphalium* in our last plate, prefers a barren gravelly soil, but is generally found in more grassy or shady spots, and often upon chalk or limestone. It is biennial, flowering naturally in July and August; but from accidental causes its blossoms may occasionally be met with in early spring, or late in mild winters.

Root woody and branched. Stem a foot or two high, upright and straight, leafy, furrowed, purplish and hairy, producing many flowers in a racemose form in its upper part, on long bracteated stalks. Leaves scattered, sessile, roughish, of an oblong-lanceolate, spatulate, or tongue-like figure, mostly entire; the lowermost obovate and often coarsely serrated. Calyx hairy. Flowers appearing delicately streaked with blue, from the numerous upright linear florets of the radius, which encompass the yellow disk. Seed-down copious, long, rough, of a tawny hue, by which, when once known, the plant is easily recognised. Seeds rough.

Blechnum boreale.

May 1 1803 Published by Ja.s Sowerby, London.

BLECHNUM boreale.

Northern Blechnum.

CRYPTOGAMIA Filices.

GEN. CHAR. *Fructif.* in longitudinal continued lines, near the rib. *Involucrum* superficial, continued, opening towards the rib.

SPEC. CHAR. Frond pinnated, smooth; its lobes linear, bluntish, entire, scarcely dilated at the base.

SYN. Blechnum boreale. *Swartz. in Schrad. Journ. ann.* 1800, *v.* 2. 75.

B. Spicant. *With.* 765. *Hull.* 242. *Sym.* 193. *Relh.* 407.

Osmunda borealis. *Salisb. Prod.* 402.

O. Spicant. *Linn. Sp. Pl.* 1522. *Huds.* 450. *Abbot.* 224. *Bolt. Fil.* 8. *t.* 6. *Curt. Lond. fasc.* 2. *t.* 67.

Acrostichum Spicant. *Sibth.* 267.

Lonchitis aspera. *Raii Syn.* 118.

A NATIVE of moist shady places, as well as of open barren and stony heaths, where its seeds are perfected in July and August.

Root perennial, black and scaly. Fronds several, a foot or more in height, erect, straight, lanceolate, acute, smooth, of a deep green, formed of numerous parallel linear alternate segments, more or less closely set, entire, bluntish with a minute point, their base scarcely at all dilated or auricled. The segments of the fertile fronds are much narrower and more distant than those of the barren ones. Innumerable capsules form a brown line close to the rib of each lobe, covered when young with an uninterrupted membrane, arising from the surface of the leaf, at some distance from its margin, and opening at the side next the rib, being forced back by the swelling capsules. Each capsule is encompassed with a ring.

That this fern is a real *Blechnum* there can be no doubt; and of the various discordant synonyms above enumerated we trust it will be found, on referring to the foreign species, that we have chosen the most expressive.

Cryptogramma crispa.
May 1. 1805 Published by Jas. Sowerby, London

PTERIS crispa.

Curletl or Rock Brakes.

CRYPTOGAMIA Filices.

GEN. CHAR. *Fructif.* in a marginal continued line. *Invol.* formed of the reflexed margin of the leaf itself, uninterrupted and bursting inwards.

SPEC. CHAR. Frond thrice pinnate; the barren leaflets wedge-shaped, cut; the fertile elliptical, obtuse, convex.

SYN. Pteris crispa. *Linn. Mss. in Sp. Pl.* 1522. *With.* 764. *Hull.* 243.

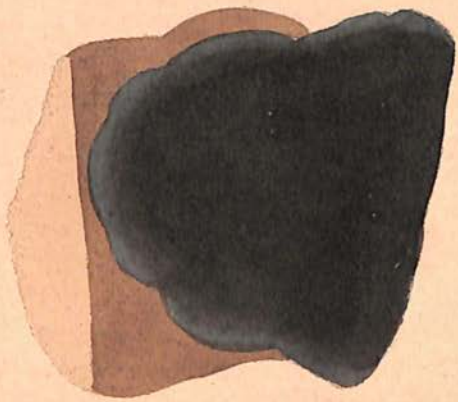
Osmunda crispa. *Linn. Sp. Pl.* 1522. *Huds.* 450. *Lightf.* 655. *Bolt. Fil.* 10. *t.* 7.

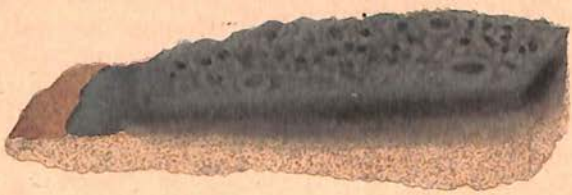
Adiantum album crispum alpinum. *Raii Syn.* 126.

THE dry barren sides of mountains in Westmoreland, Wales and Scotland derive no inconsiderable degree of beauty from the pea-green feathery tufts of this elegant fern, which spring out of their stony crevices, sometimes in great abundance, and are strikingly different in appearance from every other British plant of the same family, looking, when young, more like the leaves of the umbelliferous tribe. The fructification is perfected in July, but "the sear the yellow leaf" remains to a late period of the year.

The root is fibrous, tufted and perennial. Fronds from 6 to 12 inches high, alternately twice or thrice pinnate, smooth, with long smooth pale stalks. Leaflets on short stalks; the barren ones wedge-shaped, veiny, cut and notched, flat; the fertile in a separate frond, elliptical, narrow, obtuse, convex, undivided, their edges a little waved, turned in, and forming the membranous wavy covering of the fructification. Capsules annulated as in the preceding.

Nothing can more strikingly evince the ignorance of systematic botanists respecting ferns than their having so long referred these two species to *Osmunda*.





Collema nigrum?

May 1808 Published by the Society

LICHEN niger.

Inky Lichen.

CRYPTOGAMIA Algæ

GEN CHAR. Male, scattered warts.

Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust of sooty black, composed of very minute, imbricated, lobed and cut leaflets; the margin blueish. Shields scattered, small, black; at first bordered and concave; at length convex.

SYN. Lichen niger. *Huds.* 524. *Linn. Suppl.* 449. *Achar. Prod.* 92. *With. v.* 4. 10. *Hull.* 286. *Sibth.* 319.

———o———

MR. HUDSON first noticed this Lichen in Britain, and mentions the neighbourhood of St. Ives, Cornwall, as its particular place of growth. We found it twenty years ago about Kirkby Lonsdale, Westmoreland, growing plentifully upon moist shady rocks. Mr. Harriman has sent very fine specimens from the county of Durham; and Mr. Griffith, and others from Wales. It prefers calcareous rocks.

The crust is very black, looking like stains of ink upon the stone, the edge being grey or blueish. It is thin and tender, with difficulty to be paired off entire, even in moist weather, being composed of innumerable minute leaves or branches, finely cut and palmate, quickly imbibing moisture and so becoming gelatinous. In an old dry state they assume a pale or greyish hue. The shields are small, scattered, black, opaque; when young slightly concave, with a smooth border of their own colour; but by age they grow convex and lose their border. This species is very distinct in colour from *L. microphyllus* of Acharius, *carnosus* of Dickson, as well as much smaller in all its parts.

Mr. Griffith (see Withering) conceives it to be transformed by age into *L. plumbeus, v.* 5. *t.* 353; but as such a metamorphosis would overset all ideas of specific distinction in Natural History, we conceive the appearance of it to have been caused by seeds of the *plumbeus* vegetating in a bed of decayed *L. niger.*

Collema fasciculare?

May 1. 1803 Published by Ja.s Sowerby London

LICHEN fascicularis.

Clustered Gelatinous Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.

Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Clustered, gelatinous. Leaves dilated upwards, plaited, lobed and crenate. Shields marginal, shortly stalked, clustered, turbinated, reddish.

SYN. Lichen fascicularis. *Linn. Mant.* 133. *Achar. Prod.* 129. *Huds.* 536. *With. v.* 4. 76. *Hull.* 301. *Relh.* 463.

Lichenoides gelatinosum palmatum, tuberculis conglomeratis. *Dill. Musc.* 141. *t.* 19. *f.* 27.

COMMUNICATED by Mr. Oliver and Mr. Harriman from Durham. We have gathered it on mossy trees about Ambleside, Westmoreland. It has been noticed by but few botanists, being dried up and shrunk to nothing in dry weather, so as to have no appearance of a vegetating substance; but during rain it becomes plump and conspicuous. It belongs to the obscure tribe of gelatinous Lichens, the *Collemata* of recent writers, but is one of the best defined of that tribe, though the accounts of authors respecting it are by no means clear. The following, assisted by the annexed plate, will prevent mistakes about it in future.

The fronds grow in dense clusters, and are from a quarter of an inch to nearly an inch high, very gelatinous, of a dull greenish black, paler at the base. They are compressed and narrow at that part, much dilated upwards, longitudinally plaited, terminated by great numbers of upright marginal turbinated shields, each standing on a thick short stalk, of the substance of the leaf, which forms the thick wavy border. The disk is flattish, of a red brown when arrived at maturity.

Rhodomela Lycopodioides.

May 1 1803 Published by Ja.s Sowerby London

FUCUS lycopodioides.

Club-Moss Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond thread-shaped, branched, clothed on every side with dense prominent cylindrical bristles. Branches generally undivided.

SYN. Fucus lycopodioides. *Linn. Syst. Veg. ed.* 14. 969. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 223. *Turn. Syn.* 343. *With. v.* 4. 107. *Hull.* 327. F. Lycopodium. *Stackh. Ner.* 107 *t.* 17. Turner. Conferva squarrosa. *Fl. Dan. t.* 357.

MR. WOODWARD originally informed us of his having found this rare Fucus at Cromer, and we suspect the mention of Yarmouth in the Linn. Trans. to be a mistake. The Rev. H. Davies received it from the Hebrides. Our specimens were obligingly communicated by Mr. N. J. Winch, from Bates's Island, near Hartley Pans, Northumberland, where it is not uncommon on the stems of *F. digitatus*. With them we received the following description, drawn up from a careful examination of the recent plant, by Mr. R. Waugh and Mr. J. Thornhill. The last-mentioned gentleman has several times found the plant on the coast of Northumberland and Durham.

"Root a very small callous disk. Stem 6 or 8 inches long, filiform, about as thick as a crow's quill, mostly divided into a few long almost wholly simple branches; densely covered with *setæ* pointing in every direction, from ¼ to ½ an inch long, mostly simple, sometimes forked, nearly of an equal thickness throughout. When magnified the *setæ* appear uniform, without *septa*, semidiaphanous, of a dull red. Whole plant reddish brown, drying black. Fructification unknown.

Conferva rubra frequently grows on this Fucus, and the above gentlemen suspect its young shoots, being jointed, may have caused the *setæ* to be so described. We should acquiesce in this opinion, as we can find no joints in the Linnean specimen; but Mr. Turner witholds his assent.

Rhodomela subfusca

May 1 1803 Published by Jas Sowerby London

FUCUS subfuscus.

Brownish Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond thread-shaped, much branched, ultimate branches mostly alternate, awl-shaped, short. Fruit in minute, oblong, pointed, clustered pods.

SYN. Fucus subfuscus. *Woodw. Tr. of Linn. Soc. v.* 1. 131. *t.* 12. *and v.* 3. 212. *Turn. Syn.* 350. *With. v.* 4. 115. *Hull.* 326.

F. confervoides. *Huds.* 591.

F. variabilis. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 220. *With. v.* 4. 116. *Hull.* 326.

COMMON on the Norfolk coast, and found also in Scotland and Cornwall; yet it is so variable a species as to have been little understood, even by botanists most conversant with this tribe. Mr. Turner, to whom we are obliged for perfect specimens, has illustrated its history at length in his *Synopsis*, which, added to what may be found in the Linnean Transactions, leaves nothing to be desired on the subject. We must content ourselves with such a description as may suffice to ascertain the species.

The colour is a light reddish brown, palest in the younger part. Substance firm and cartilaginous. Root a thin expanded disk. Fronds numerous, thread-shaped, much, and for the most part alternately, branched, rough about the base with the remains of old branches; their ultimate divisions awl-shaped and short. Fructification peculiarly discriminative of the species, produced in the spring or early in summer, (when alone the plant is entire and in vigorous vegetation,) in the form of minute, oblong, clustered, pointed pods, growing on short axillary or lateral stalks, and each containing about 8 dark seeds.

FUCUS Wigghii.

Wigghian Fucus.

CRYPTOGAMIA Algæ.

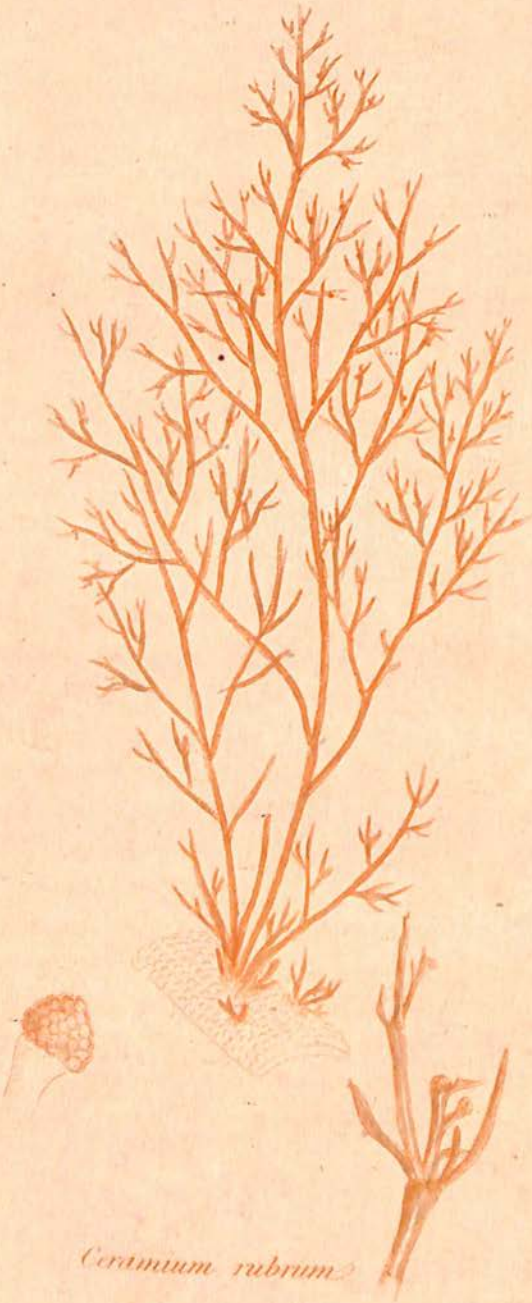
GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond thread-shaped, tender, much branched; ultimate branches bristle-shaped, scattered, mostly simple, each tipped with a lanceolate pointed capsule.

SYN. Fucus Wigghii. *Turn. Tr. of Linn. Soc. v.* 6. 135. *t.* 10. *Synops.* 362.

THE only knowledge we have of this Fucus is from Mr. Wigg, who first found it on the Yarmouth coast, and Mr. Turner, who has described it by the name of its discoverer. It is found in the middle of summer, thrown up on the coast, and is presumed to be annual.

In delicacy of form and texture, almost in beauty of colour, this nearly approaches *F. asparagoides*, described in our 8th vol. *t.* 571, the only species with which it can by any means be confounded. The differences however are plain and certain. The little ultimate branches of *F. Wigghii* are not ranged in an opposite manner, but irregularly though densely scattered. Those which bear the fructification are longer, not shorter, than the others, and much more numerous than in *F. asparagoides*. The seeds are imbedded in a terminal, lanceolate or ovate, pointed pod.



Ceramium rubrum

CONFERVA rubra.

Red Conferva.

CRYPTOGAMIA Algæ.

GEN CHAR. *Seeds* produced in round, solitary, closed tubercles, projecting from the frond, but united with it.

SPEC. CHAR. Scarlet, repeatedly branched, thread-shaped, thickly jointed; ultimate branches bristle-shaped, alternate. Capsules sessile, solitary, dark red.

SYN. Conferva rubra. *Huds.* 600. *With. v.* 4. 138. *Hull.* 333.

C. nodulosa. *Lightf.* 994.

C. marina geniculata ramosissima lubrica, longis sparsisve ramulis. *Raii Syn.* 61. *Dill. Musc.* 34. *t.* 6. *f.* 38.

WE have mentioned *p.* 1163 that this Conferva often grows on *Fucus lycopodioides*. From the same gentlemen to whom we are obliged for that communication, we have received full-grown specimens on the stem of the great *F. digitatus*. It is not a rare species, being found, either growing or cast up, on the coast of various parts of Britain.

Its colour, naturally a fine red, is soon changed to a pale or sandy hue by exposure on the beach, especially in the older branches. The fronds are numerous, very much and alternately branched, slender, thread-shaped, very closely jointed throughout, their ultimate branches bristle-shaped and a little incurved. The joints are deep red; the interstices pale, as usual in other species. The capsules, full of dark red seeds, stand sessile and solitary upon the sides of the smaller branches.

Lathyrus Aphaca.

May 1. 1803. Published by Jn.° Sowerby, London.

LATHYRUS Aphaca.

Yellow Vetchling.

DIADELPHIA Decandria.

GEN. CHAR. *Style* flattened, downy above, broader upwards. Two upper segments of the *calyx* shortest.

SPEC. CHAR. Stalks single-flowered. Tendrils without leaves. Stipulæ between heart- and arrow-shaped.

SYN. Lathyrus Aphaca. *Linn. Sp. Pl.* 1029. *Sm. Fl. Brit.* 763. *Huds.* 315. *With.* 632. *Hull.* 160. *Relh.* 279. *Sibth.* 222. *Curt. Lond. fasc.* 5. *t.* 51.
Aphaca. *Raii Syn.* 320.

FOUND in the borders of gravelly corn-fields, but rarely. Our specimen grew in Essex. Mrs. Kett has observed this plant in a gravel-pit in the road from Norwich to Brooke. The flowers appear from the end of May till towards August. The root is small and annual. Stem branched, weak, supported on other plants by its numerous alternate simple leafless tendrils, each of which springs from between a pair of large opposite sessile stipulæ, of an oblong triangular form, either quite entire, or slightly toothed on each side above their base. These stipulæ seem to perform the functions of leaves; for there are no others, except a pair of minute ovate leaflets, on one or two rudiments of tendrils, when the herb first springs up, and which soon wither away. These have been mentioned by Linnæus and Curtis, and the latter judiciously points out a similar phænomenon in a New Holland *Mimosa*. We now know several other such instances in that genus. See *Botany of N. Holland, t.* 15 *and* 16, *and Tr. of Linn. Soc. v.* 1. 253.

The flowers of *L. Aphaca* are small, solitary, drooping and lemon-coloured; its calyx-teeth long and acute. The pod is smooth, like every part of the herbage, and the green of the whole has a glaucous tinge.

May 1. 1806. Published by Jas. Sowerby, London.

VICIA Cracca.

Tufted Vetch.

DIADELPHIA Decandria.

GEN. CHAR. *Stigma* transversely bearded on the lower side.

SPEC. CHAR. Stalks many-flowered. Flowers imbricated. Leaflets lanceolate, downy. Stipulæ half-arrow-shaped, mostly entire.

SYN. Vicia cracca. *Linn. Sp. Pl.* 1035, *Sm. Fl. Brit.* 769. *Hudf.* 317. *With.* 636. *Hull.* 161. *Relh.* 281. *Sibth.* 223. *Abbot.* 157. *Curt. Lond. fasc.* 5. *t.* 54. *Mart. Rust. t.* 117.
Cracca. *Raii Syn.* 322.

A COMMON, but rather ornamental plant, in hedges and among bushes, more especially in a black boggy soil on a gravelly bottom, about osier-grounds, where the white Convolvulus grows. In such places the dense long spikes of purple flowers, tost up as it were into the air, are more remarkable than in any other situation. They are principally observable in July and August. The tall branching slender leafy stems are entangled among bushes and reeds, and strongly bound to them by long branched curling tendrils. Each leaf, which the tendrils terminate, consists of many lanceolate entire leaflets, more or less hoary with silky hairs. The stipulæ are small, half-arrow-shaped, most frequently entire, occasionally toothed. Flower-stalks angular and hairy, bearing many imbricated rather drooping flowers, whose various tints will repay a careful investigation. The pods are pendulous, smooth, of a light brown. Seeds globular, black.

Botanical writers have recommended this Vetch as very nutritious for cattle, but recent agriculturists have not yet attended to it. Indeed to gather it from its native situations would be impracticable, so firmly does it cling to its neighbours; and if cultivated in an open field, it would probably choke itself for want of support.

Holcus lanatus

May 1 1803 Published by Jas Sowerby

HOLCUS lanatus.

Meadow Soft-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, 2 flowered; one of the flowers with an imperfect germen. *Cor.* of 2 valves; the outer one awned.

SPEC. CHAR. Calyx-glumes woolly. Hermaphrodite floret, beardless: male with an arched recurved awn.

SYN. Holcus lanatus. *Linn. Sp. Pl.* 1485. *Sm. Fl. Brit.* 89. *Huds.* 440. *With.* 134. *Hull.* 225. *Relh.* 30. *Sibth.* 40. *Abbot.* 218. *Curt. Lond. fasc.* 4. *t.* 11. *Dicks. H. Sicc. fasc.* 9. 16.

Gramen miliaceum pratense molle *Raii Syn.* 404.

FREQUENT and abundant in meadows and pastures, flowering in June and July.

The roots are perennial, tufted, not creeping. Stems several, upright, simple, leafy, round, jointed, clothed, more especially in the lower part, with dense short soft hairs, pointing downward. Leaves flat, pale green, sharp pointed, covered with soft hairs on both sides, but especially beneath. Stipula short and blunt. Panicle erect, compound, often ten tinged with red, particularly when it first emerges from the long sheath of the uppermost leaf. Its branches are subdivided, capillary and downy. Calyx-husks equal in length, angular, all over clothed with soft woolly down, tinged with purple, often granulated in their upper part. Florets two, on a common little stalk; the lowermost beardless, furnished with both stamina and pistillum; the upper generally with stamina only, but its outer husk terminates in an awn scarcely projecting beyond the calyx, and when ripe curved back in an arched manner; well compared by Scheuchzer to a fish-hook. This circumstance, though admirably characteristic of the species, and particularly mentioned by the excellent observer just named, has been overlooked by Mr. Curtis and others when labouring to distinguish this grass from the following.

Holcus mollis.

May 1 1803 Published by Jas Sowerby London

HOLCUS mollis.

Creeping Soft-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, 2-flowered; one of the flowers with an imperfect germen. *Cor.* of 2 valves; the outer one awned.

SPEC. CHAR. Calyx-glumes nearly equal, partly naked. Hermaphrodite floret lowest and beardless: male with a sharply bent awn. Root creeping.

SYN. Holcus mollis. *Linn. Sp. Pl.* 1485. *Sm. Fl. Brit.* 89. *Huds.* 440. *With.* 135. *Hull.* 225. *Relh.* 30. *Sibth.* 40. *Abbot.* 217. *Curt. Lond. fasc.* 5. *t.* 8. *Dicks. H. Sicc. fasc.* 9. 17.

Gramen miliaceum aristatum molle. *Raii Syn.* 404.

THIS *Holcus* is much less frequent than the preceding, and grows in a different kind of situation, preferring shady copses and hedges. It flowers in July and is perennial, the widely creeping root indeed being very difficult of extirpation, and affording one of the most evident marks to distinguish it from *H. lanatus*. To which may be added that the *mollis* is commonly a more slender and less downy plant; its panicle smaller, but its flowers larger, distinguished by their more prominent awns, which, when fully ripe and dry, either continue projecting and nearly straight, or are bent back at a right angle, by no means arched like those of the other. For this character we must however wait in both instances till the husks are quite mature and dry.

These grasses are considered as of very little value to the farmer, especially that now before us; but we do not, with Mr. Curtis, esteem this formidable as a Couch-grass. It is not common, nor will it thrive in open land. Few botanists really know these species from each other, and we have scarcely found any one who can remember their Latin names, which must be confessed to be altogether inexpressive, and tending to puzzle rather than to assist the memory.

Jun.1 1800. Published by Jas Sowerby London.

BROMUS secalinus.

Smooth Rye Brome-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, 2-ranked. *Awn* from below the top. *Inner husk* fringed.

SPEC. CHAR. Panicle spreading; stalks but little branched. Spikelets ovate, compressed, of about ten distinct, somewhat cylindrical, florets.

SYN. Bromus secalinus. *Sinn. Sp. Pl.* 112. *Sm. Fl. Brit.* 125. *Tr. of Linn. Soc. v.* 4. 281. *Hull.* 24. *Relh.* 39. *Abbot.* 22.

B. polymorphus γ. *Huds.* 49. *With.* 150. *var.* 2.

Festuco avenacea, spicis habitioribus, glumis glabris. *Raii Syn.* 414.

SINCE the species of this difficult genus have become better known to botanists, the *B secalinus* has been observed in corn-fields in various parts of Britain. In Norfolk it often occurs. Our specimens were sent from Copgrove near Knaresborough by the Rev. Mr. Dalton, in the middle of September, 1802.

The root is annual. Stem about 3 feet high, simple, round, smooth and leafy. Leaves broadish, flat, ribbed; rough at the edge and underneath; clothed above with short soft hairs: their sheaths furrowed, but not rough. Stipula very short. Panicle various in luxuriance, but the branches are generally not much subdivided; they grow upright, at length spreading, and curved down by the ripe spikelets, which are smooth, ovate, flat, composed of 8 or 10, rarely 12 florets, so far separated at their base when ripe that the common stalk appears between them. Each floret is nearly cylindrical, smooth, rarely downy, marked with 7 slight ribs, and bearing from its back a rough shortish awn. The inner husks are toothed rather than fringed. In an early state the florets are flatter and more imbricated, so that this species may then be confounded with *B. racemosus, t.* 1079. For want of attending to their different stages of growth Mr. Hudson has been led into great errors.

158.

Bromus asper.

June 1 1803 Published by Jas Sowerby London

BROMUS asper.

Hairy Wood Brome-grass.

———o———

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, 2-ranked. *Awn* from below the top. *Inner husk* fringed.

SPEC. CHAR. Panicle drooping, branched. Florets lanceolate, almost cylindrical, but slightly ribbed. Leaves uniform: the lower ones hairy.

SYN. Bromus asper. *Lin. Suppl.* III. *Sm. Fl. Brit.* 133. *Tr. of Linn. Soc. v.* 4. 293. *With.* 161. *Hull.* 25. *Relh.* 40. *Mart. Rust. t.* 126.

B. nemoralis. *Huds.* 51.

B. hirsutus. *Curt. Lond. fasc.* 2. *t.* 8. *Sibth.* 48. *Abbot.* 23.

Gramen avenaceum dumetorum, paniculâ sparsâ. *Raii Syn.* 415.

———o———

THIS gigantic grass often appears in moist woods and hedges about July and August, extending its wide-spreading drooping panicle over the tops of ferns and bushes, being often 6 feet in height.

The root is annual or biennial, consisting of many strong pale fibres, not creeping. Stem erect, round, leafy, smooth in the upper part. Leaves spreading, broad, of a full green, flat, ribbed, rough, and also clothed with long spreading hairs. They are all nearly of equal breadth, in which respect added to many others this differs from *B. erectus, t* 471. The sheaths are cylindrical, very rough with deflexed hairs. Spikelets linear-oblong, pendulous, often brownish, a little downy. Calyx-glumes very unequal. Florets about 9, imbricated, at length loosely spreading, lanceolate, somewhat cylindrical, obscurely 3-ribbed, roughest on the keel. Awn rough, from below the top, and shorter than the husk. Inner husk closely fringed, its membranous edges bent in. Antheræ saffron-coloured.

If the dorsal awn and fringed inner husk be duly attended to, this can never more be confounded with *Festuca gigantea*

Tordylium
maximum

TORDYLIUM maximum.

Great Hart-wort.

PENTANDRIA Digynia.

GEN. CHAR. *Invol.* long and undivided. *Corolla* radiant. *Flowers* all hermaphrodite. *Fruit* nearly orbicular, flattened, notched in the margin.

SPEC. CHAR. Umbels dense. Leaflets lanceolate, deeply serrated. Stem rough with bristles bent downwards.

SYN. Tordylium maximum. *Linn. Sp. Pl.* 345. *Sm. Fl.* 295. *With.* 286. *Hull.* 60. *Sibth.* 94. *Dill. in Raii Syn.* 206.

OUR wild specimen of this rare plant was gathered on the north side of Oxford, the only spot in Britain known to produce it; but having been observed there for above a century past, it cannot but be considered as a native. Morison clearly mention sits growing about London; but if Petiver's authority be of any weight, the Isleworth plant must be *T. officinale*. The botanists of his time appear to have found both species; and though it is wonderful any one could confound them, yet Dillenius, in his edition of Ray's *Synopsis*, either has done so, or at least has strangely obscured their history. Trusting to the faithful Ray in his 2d edition for *T. officinale*, I could not but admit both species into the *Flora Britannica*.

T. maximum has a tapering annual root, and flowers from June to August. Stem erect, 3 or 4 feet high, branched, leafy, furrowed, rough with minute rigid bristles pointing downwards. Leaves pinnate, rough; the leaflets of the lowermost broad, lobed and notched; of the rest lanceolate, narrow, coarsely but regularly serrated. Umbels on long solitary rough stalks, opposite to the leaves. General and partial involucra bristle-shaped, rough. Central partial umbels nearly sessile. Flowers white or rose-coloured. Outer petals largest. Seed all over bristly, with a circular thick pale or reddish edge, rugged, but not so beautifully notched as some other species.

Daucus Carota.

DAUCUS Carota.

Wild Carrot.

———o———

PENTANDRIA Digymia.

GEN. CHAR. *Involl.* pinnatifid. *Corolla* somewhat radiant. *Fruit* rough.

SPEC. CHAR. Fruit bristly. Footstalks ribbed on the under side. Segments of the leaves acute.

SYN. Daucus Carota. *Linn. Sp. Pl.* 348. *Sm. Fl. Brit.* 300. *With.* 289. *Hull.* 59. *Relh.* 109. *Sibth.* 93. *Abbot.* 59. *Woodv. Med. Bot. t.* 161. *Mart. Rust. t.* 82.

D. vulgaris. *Raii Syn.* 218.

Caucalis Carota. *Huds.* 114.

———o———

COMMON in pastures, and especially about the borders of fields, flowering in June and July.

Root biennial, tapering, yellow, remarkable for a peculiar sweetish aromatic flavour, of which the whole herb partakes. Stem upright, solitary, branched and spreading, round, furrowed, more or less bristly. Leaves twice or thrice pinnate; their segments sharply cut, narrow and hairy; their common footstalks ribbed beneath. The umbels grow on long naked stalks, and consist of a great number of roughish rays, the outermost of which spread very much, and are a great deal longer than the inner ones, so that the upper surface of the whole umbel, when in blossom, is flat, but afterwards by contraction of the rays it becomes concave like a bird's nest. The general involucra are deeply pinnatifid and linear; the partial ones either simple or three-cleft. Flowers radiant, cream-coloured, but the central abortive floret is remarkable for its, more or less deep, blood-red hue. The angles of the seeds are fringed with small divaricated bristles.

This is the origin of the Garden Carrot. We are now almost persuaded that the *Daucus maritimus*, the segments of whose leaves are broad, obtuse and fleshy, may be a distinct species.

Juncus filiformis.

June 1. 1803. Published by J. Sowerby, London.

JUNCUS filiformis.

Least Rush.

—o—

HEXANDRIA Monogynia.

GEN. CHAR. *Cal.* of 6 leaves, permanent. *Cor.* none. *Caps.* superior, of 3 valves, with 1 or 3 cells. *Seeds* several. *Stigmas* 3.

SPEC. CHAR. Stem naked, thread-shaped, drooping. Panicle lateral, nearly simple, subtended by a bractea. Capsules roundish.

SYN. Juncus filiformis. *Linn. Sp. Pl.* 465. *Sm. Fl. Brit.* 377. *Spicil.* 2. *t.* 3. *Huds.* 149. *With.* 346. *Hull.* 75. *Dicks. Dr. Pl.* 32. *H. Sicc. fasc.* 14. 16.

J. parvus, calamo supra paniculam compactam longiùs producto. *Raii. Syn.* 432.

—o—

THIS very rare species of Rush was only known to British botanists as a native of the beautiful country about the lakes of Westmoreland and Cumberland, till Mr. Dickson gathered it on Ben Lawers, so famed among the botanical mountains of the north. It grows in little plashy alpine bogs, flowering in August, and is perennial,

The root creeps horizontally, throwing out deep perpendicular fibres, and several upright simple round smooth stems, about 10 or 12 inches high, whose summits are pointed, but weak, and often drooping in some degree. The base of each is separately enveloped in a few sheathing scales, each tipped with a minute point, seeming the rudiment of a leaf. The panicle, nearly simple, and consisting of but a few pale green flowers, bursts laterally from the stem below the middle, and is accompanied underneath by a small leafy bractea, varying in length according to circumstances. Calyx-leaves lanceolate, with 3 ribs. Stamina 6. Capsule roundish, blunt, of 3 cells. Seeds numerous, small.

1176.
518.

Luzula
spicata.

Pub.d 1.st 1803 Published by Jn.o Sowerby London

JUNCUS spicatus.

Spiked Rush.

———o———

HEXANDRIA Monogynia.

GEN. CHAR. *Cal. of* 6 *leaves,* permanent. *Cor.* none. *Caps.* superior, of 3 valves, with 1 or 3 cells. *Seeds* several. *Stigmas* 3.

SPEC. CHAR. Leaves flat. Spike cluster-like, drooping, compound at the base. Capsules pointed.

SYN. Juncus spicatus. *Linn. Sp. Pl.* 469. *Fl. Lapp. n.* 125. *t.* 10. *f.* 4. *Sm. Fl. Brit.* 386. *Huds.* 650. *With.* 350. *Hull.* 76. *Lightf.* 187. *Dicks. Dr. Pl.* 33. *H. Sicc. fasc.* 15. 11.

———o———

COMMUNICATED with the preceding by Mr. G. Donn, from the alpine regions of Scotland. This is likewise perennial, flowering in July and August, and growing only about the grassy summits of the highest hills. We have formerly gathered it upon Ben Lomond. It seems not yet to have been observed in England or Wales, though found on the Swiss alps and in Lapland.

The root is tufted and fibrous, crowned with several parcels of linear, recurved, channelled leaves, more or less hairy at their edges. Stems solitary, 6 or 8 inches high, round, slender, smooth and simple, bearing 2 or 3 remote sheathing leaves. Spik terminal, solitary, drooping, interrupted and subdivided in the manner of a bunch of grapes, and having a long lanceolate entire smooth bractea at each subdivision, and a smaller laciniated one under each flower. Segments of the calyx tipped with hair-like points. Stamina 6. Capsule pointed, of 3 cells, each occupied by one large seed, as in *J. campestris, t.* 672, to which this species is certainly, as Lightfoot observes, very nearly related; but they can never be confounded together. They often grow together in the [illegible] situation, but preserve their character distinct.

545.

June 1. 1803. Published by Ja.s Sowerby, London.

EPILOBIUM montanum.

Broad smooth-leaved Willow-herb.

GEN. CHAR. *Cal* in 4 segments. *Petals* 4. *Caps.* oblong, inferior. *Seeds* feathered.

SPEC. CHAR. Leaves on footstalks, ovate, toothed. Stem round. Stigma in four lobes.

SYN. Epilobium montanum. *Linn. Sp. Pl.* 494. *Sm. Fl. Brit.* 411. *Huds.* 162. *With.* 367. *Hull.* 82. *Relh.* 151. *Sibth.* 122. *Abbot.* 85. *Curt. Lond. fasc.* 3. *t.* 24.

Lysimachia campestris. *Raii Syn.* 311.

FREQUENT in dry shady hilly places, upon stones, among bushes, or about old walls and cottage roofs, flowering in July.

The root is perennial and moderately creeping, its shoots red, with which colour the stem and older leaves are often elegantly tinged, as in some of the *Geranium* tribe. These two genera have in several instances an affinity in smell and taste, though so widely different in botanical characters. The stem is erect, scarcely branched, leafy, round, occasionally a little downy. Lower leaves opposite, on short stalks, ovate, sharply toothed, smooth, with some hoariness about the veins; the uppermost alternate and narrower. Flowers in a loose terminal leafy simple cluster. Germen long, smooth, dark red on one side. Petals inversely heart-shaped, rose-coloured, not large. Stigma in four deep segments, by which this is essentially distinguished from *E. roseum*, a species that otherwise much resembles it, see *v.* 6. *t.* 693.

622.

June 1. 1803. Published by Jas. Sowerby, London.

SILENE anglica.

English Catchfly.

DECANDRIA Trigynia.

GEN. CHAR. *Cal.* swelling, of one leaf. *Petals* 5, with claws. *Caps.* superior, imperfectly, 3-celled, bursting in their summit. *Seeds* many.

SPEC. CHAR. Hairy, viscid. Petals notched. Flowers lateral, erect, alternate, Lower fruit spreading or reflexed.

SYN. Silene anglica. *Linn. Sp. Pl.* 594. *Sm. Fl. Brit.* 465. *Huds.* 187. *With.* 413. *Hull.* 97. *Relh.* 167. *Abbot.* 95. *Curt. Lond. fasc.* 4. *t.* 30. *Dichs. H. Sicc. fasc.* 13. 18.

Lychnis sylvestris, flore albo minimo. *Raii Syn.* 339.

LIKE other annuals which grow in cultivated fields occasionally, but are not common weeds, this *Silene* occurs now and then on light sandy soils among corn, turnips, &c. but is rarely seen for several years in succession in any one spot. It flowers in July.

Root small. Herb hairy and slightly viscid. Stem branched and spreading, scarcely supporting itself alone, leafy, round, swelling above each joint. Leaves lanceolate or obovate, acute, entire. Flowers solitary, from the bosoms of the upper leaves, on short stalks, upright. Calyx ribbed, hairy, at length swelling. Petals broadly elliptical, notched, with long claws, crowned with a notched scale. Their colour is generally white; but we have found them with a central reddish spot, faintly imitating *S. quinquevulnera*, *t.* 86. Capsules ovate, hard and rigid; the lower ones generally spreading widely, or bent back; the uppermost nearly erect.

Anictangium ciliatum.

GYMNOSTOMUM ciliatum.

Branched Hoary Beardless-moss.

—o—

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* without a fringe. *Lid* deciduous. *Veil* separating entire from the base.

SPEC. CHAR. Stem much branched, spreading. Leaves ovate, without rib or nerve, pellucid at the point. Capsule bell-shaped, nearly sessile.

SYN. Gymnostomum ciliatum. *Swartz. Musc. Suec.* 19. *Roth. Germ. v.* 3. 129.

Hedwigia ciliata. *Hedw. Crypt. v.* 1. 107. *t.* 40.

Bryum apocarpum *β. Linn. Sp. Pl.* 1579. *Huds.* 474. *With.* 809.

Fontinalis albicans. *Hull.* 275.

Phascum piliferum. *With.* 786!

Sphagnum nodosum, hirsutum et incanum. *Dill. Musc.* 246. *t.* 32. *f.* 5.

S. cauliferum et ramosum saxatile hirsutum incanum, capitulis virentibus. *Raii Syn.* 105.

—o—

NOTHING can more plainly shew the necessity of attending to the Hedwigian characters of mosses than the mistake of former botanists in confounding this with *Grimmia apocarpa*, see *t.* 1134; and we now on thorough conviction adopt his principles, so far at least as they accord with Nature. When they seem to us too arbitrary, as respecting the situation of the male flowers, or too minute, as when they refine too much on the structure of the inner fringe in *Bryum* and *Hypnum*, we have recourse to our own judgment and the Linnæan principles of natural genera.

The moss before us grows on great stones in mountainous countries. We have received it from Mr. Harriman and Mr. Turner; also from several friends in Scotland. It varies much in size, quantity of branches, and length of the transparent point of the leaves. The stems form dense tufts. Leaves entire, pale green, with a rib. Capsules sessile at the end of each little branch, solitary, roundish, red, with a naked mouth, and almost flat lid, overtopped by the torn points of the surrounding leaves.

1628.

Daltonia heteromalla.

June 1 1803 Published by Jas Sowerby, London.

NECKERA heteromalla.

Lateral Neckera.

CRYPTOGAMIA Musci.

GEN. CHAR. *Fringe* double: *outer* of 16 tapering teeth: *inner* of 16 capillary alternate ones. *Flowers* lateral. *Veil* smooth.

SPEC. CHAR. Stem branched, spreading. Leaves ovate, pointed, concave, imbricated. Capsules leaning one way.

SYN. Neckera heteromalla. *Hedw. Sp. Musc.* 202. *Crypt. v.* 3. 38. *t.* 15. *Sibth.* 304.

Sphagnum arboreum. *Linn. Sp. Pl.* 1570. *Huds.* 465. *Abbot.* 229.

S. heteromallum polycephalum. *Dill. Musc.* 248. *t.* 32. *f.* 6.

S. cauliferum et ramosum minùs hirsutum, capitulis crebris pilosis per ramulorum longitudinem adnascentibus. *Raii Syn.* 105.

Fontinalis secunda. *With.* 790. *Hull.* 275. *Dicks. Dr. Pl.* 18.

Phascum repens. *With.* 785!

IT seems this moss has been hitherto observed in England only, nor is it common with us. It grows on the trunks of trees, the elegantly pinnate stems spreading close to the bark, and ripens its fruit in the spring. Our specimens were gathered by the Rev. Dr. Abbot in Clapham wood, Bedfordshire.

The stems are wiry and firm, doubly pinnate, the branches all over clothed with imbricated, ovate, pointed, concave, entire, keeled leaves, each with central rib: these that envelope the capsules, which stand solitary at the end of each branch and all lean to one side of the stem, are tipped with a considerable point or awn. The capsule is elliptical, reddish brown, smooth and even. Fringe double; the outer of 16 tapering teeth; the inner of as many smaller capillary and thin ones, standing alternately with the former. Lid conical, pale and thin. Veil brown, of nearly the same form, jagged at the edge.

Other species of this genus already figured in the present work are *Neckera crispa, t.* 617. and *N. viticulosa, t.* 265.

1516.

Hypnum undulatum.

June 1. 1805. Published by Jas. Sowerby, London.

HYPNUM undlatum.

Waved Feather-moss.

———o———

CRYPTOGAMIA Musci.

GEN. CHAR. *Fringe* double: outer of 16 tapering teeth: *inner* a toothed membrane. *Flowers* lateral. *Fruit-stalk* from a scaly sheath.

SPEC. CHAR. Stem procumbent, moderately branched. Leaves imbricated in two principal rows, waved, entire, without a main rib.

SYN. Hypnum undulatum. *Linn. Sp. Pl.* 1589. *Hedw. Sp. Musc.* 242. *Huds.* 495. *With.* 849. *Hull.* 269. *Lightf.* 744. *Dicks. H. Sicc. fasc.* 6. 22. *Ehrh. Crypt* 26.

H. pennatum undulatum, lycopodii instar sparsum. *Dill. Musc.* 271. *t.* 36. *f.* 11.

H. repens crispum, cauliculis compressis, lycopodii in morem per terram sparsis. *Raii Syn.* 88.

———o———

WE are happy to lay before the public a figure of this elegant *Hypnum*, which is very rarely found in fructification, and of which no plate occurs in the works of Hedwig. It is peculiar to dry mountainous woods. The fruit we have obtained from Bingley woods, Yorkshire, by favour of the Rev. Mr. Hailstone, and it has also been obligingly communicated to us from Ireland, by Dr. Scott and Mr. Templeton. It is produced from April to August.

This species is easily known by its large size, and delicate pale-green or whitish colour. The stems grow prostrate, and are irregularly, but not very copiously, branched. Leaves imbricated in two principle rows, compressed, lanceolate, entire, transversely waved, without a central rib, but with a pair of minute veins at the base. Fruit-stalks solitary, each from a lateral scaly bud. Capsule oblong, curved and furrowed when ripe. Outer fringe of 16 shortish teeth: inner a white membrane cut into 16 narrow teeth with notches between them. Lid with a curved beak not half so long as the capsule.

Jones J. FLOR. PLANT. del. et sc. Geo. Tinney by. London.

HYPNUM alopecurum.

Fox-tail Feather-moss.

———o———

CRYPTOGAMIA Musci.

GÉN. CHAR. *Fringe* double: *outer* of 16 tapering teeth: *inner* a toothed membrane. *Flowers* lateral. *Fruit-stalk* from a scaly sheath.

SPEC. CHAR. Root creeping. Stems erect; naked below; branched in a panicled form above. Capsules ovate, drooping, with a taper beak. Leaves serrated.

SYN. Hypnum alopecurum. *Linn. Sp. Pl.* 1594. *Hedw. Sp. Musc.* 267. *Huds.* 503. *With.* 859. *Hull.* 272. *Relh.* 436. *Sibth.* 299. *Abbot.* 249. *Dicks. H. Sicc. fasc.* 13. 22. *Ehrh. Crypt.* 37.

H. dendroides obscurius, fetis et capsulis brevioribus, subnutantibus. *Dill. Musc.* 315. *t.* 41. *f.* 49.

H. palustre erectum arbusculam referens, ramulis subrotundis. *Raii. Syn.* 81.

———o———

NEITHER has this *Hypnum* been delineated by the celebrated Hedwig. It is to be reckoned among our rarer species, at least in fructification. We received it in that state from Mr. W. Borrer of Sussex. Its general places of growth are moist and shady, as boggy woods, wet calcareous rocks or caverns, and the margins of cascades. The capsules are ripened in the spring.

The horizontal branched roots or scions produce several erect tree-like stems; naked, and when old leaflets, below; branched and subdivided above, in the form of a panicle or feather, all the branches inclining to one side, and their summits mostly tapering and elongated. Leaves dark green, yellow when exposed, imbricated every way, ovate, broad, concave, serrated, especially towards the point, and furnished with an acute central rib. Capsules on short solitary inclining stalks, ovate, smooth, nodding. Lid taper and almost as long as the capsule.

July 1 1803. Published by Jas Sowerby London

BRYUM punctatum.

Dotted Thread-moss.

———o———

CRYPTOGAMIA Musci.

GEN. CHAR. *Fringe* double: *outer* of 16 teeth, broad at their base: *inner* a toothed membrane. *Flowers* terminal.

SPEC. CHAR. Leaves obovate, entire, waved, dotted. Capsules elliptical, pendulous. Lid with a taper point.

SYN. Bryum punctatum. *Hull.* 266. *Sibth.* 291.

B. serpyllifolium, punctatum. *Huds.* 492.

B. pendulum, serpilli folio rotundiore pellucido, capsulis ovatis. *Dill. Musc.* 416. *t.* 53. *f.* 81.

B. nitidum, serpilli rotundis et latioribus foliis pellucidis. *Raii Syn.* 103.

Mnium punctatum, *With* 805. *Relh.* 420. *Abbot.* 234. *Hedw. Sp. Musc.* 193.

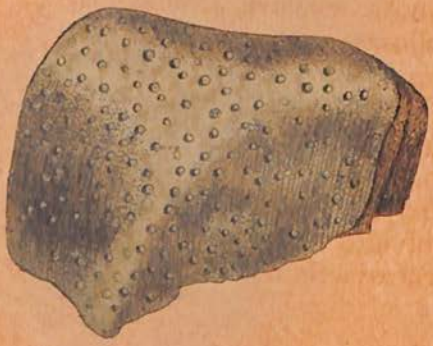
M. serpyllifolium, punctatum *Linn. Sp. Pl.* 1577.

———o———

A NATIVE of wet shady spots, for specimens of which from Tunbridge we are obliged to Mr. T. F. Forster. It is perennial, ripening its fruit during the winter and early spring; but neither the fruit, nor indeed the moss itself is of very frequent occurrence.

The root consists of dense brown fibres. Stems generally simple, reddish, leafy. Leaves obovate, broad, more or less pointed, waved, entire, with a thick cartilaginous edge; their substance thin and pellucid, pale green, beautifully dotted or reticulated like the leaves of a *Splachnum*, with a central rib. Flowers terminal, dioecious. The male flat, surrounded with a rose of larger leaves. Capsules elliptical, pendulous, on longish, red, upright, mostly solitary, stalks. Lid with a taper point, not half so long as the capsule.

Linnæus has most unwarrantably combined under his *Mnium serpyllifolium* many species as distinct from each other as they are all remarkable for elegance. The present is known at once by its broad dotted leaves.



Jul.1 1805. Published by Ja.s Sowerby, London

LICHEN exanthematicus.

Eruptive Lichen.

—o—

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust ash-coloured, smooth. Shields minute, concave, flesh-coloured, sunk in little hollows, and surrounded by a white lobed border.

SYN. Lichen exanthematicus. *Sm. Tr. of Linn. Soc. v.* 1. 81. *t.* 4. *f.* 1. *Achar. Prod.* 35. *Gicks. Crypt. fasc.* 3. 14. *With. v.* 4. 22. *Hull.* 291.
L. volvatus. *Villars. Gauph. v* 3. 998. *t.* 55.
Verrucaria clausa. *Hoffm. Fl. Germ.* 177.

—o—

THIS curious little Lichen by its manner of excavating stones is closely allied to *L. immersus, v.* 3 *t.*. 193. M. Villars has published one by the name *volvatus*, which appears to accord precisely with it, and we have Professor Hoffman's authority for its being his *Verrucaria clausa*.

Our name, which though posterior to Hoffman's has been retained by Dr. Acharius, expresses the peculiar appearance by which this Lichen is at first sight distinguishable, resembling small white pustules breaking from a grey crust. The crust is thin, smooth and uniform, closely adhering to calcareous rocks, of a pale grey or slate-colour. Each shield is solitary, minute, concave, flesh-coloured or waxy, with a border of its own substance and colour, and is sunk in a little cavity, hollowed not only out of the crust, but out of the stone beneath, the margin of which cavity is surrounded, and in an early state closed, by a thick inflexed lobed white border. It appears to be a very rare species. The only English specimens we have seen were found by the Rev. Mr. Harriman on the banks of the Tees, Durham. Mr. Dickson has observed the same in Scotland.

LICHEN quadricolor.

Four-coloured Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.

Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust leprous, grey, with white granulations. Young shields gelatinous, flesh-coloured, with a white border; old ones blackish.

SYN. Lichen quadricolor. *Dicks. Crypt. fasc.* 3. 15 *t.* 9. *f.* 3. *Achar. Prod.* 73. *With. v.* 4. 24. *Hull.* 292.

L. decoloratus. *Achar. Prod.* 50.

L. granulosus. *Ehrh. Crypt.* 145.

Patellaria decolorans. *Hoffm. Pl. Lich. v.* 2. 24. *t.* 39. *f.* 2.

FIRST observed by Mr. Dickson on the Scottish mountains, and since by Mr. D. Turner, at Lound, near Yarmouth, as well as by the Rev. Mr. Harriman, at Eggleston, Durham. It grows on the ground, in healthy sandy places, being in perfection during the winter season.

The crust is thin and inseparable from the light crumbling soil, of a grey or brownish hue, thickly sprinkled with minute white granulations, which betray an affinity to the section *Psoroma* rather than *Patellaria*, under which last Dr. Acharius has ranged this species. The shields are small, tolerably numerous, sessile, when moist remarkably gelatinous and convex, in a dry state nearly flat. When young they are of a yellowish flesh-colour, with a smooth narrow white border; but by age both disk and border become of a brownish black.

Some good botanists have confounded this with *L. leucadophila* of Ehrhart. We know it to be his *granulosus* from a comparison of specimens, and it is certainly Hoffman's *Patellaria decolorans*. Ehrhart's name is not very expressive, and has been neglected; in choosing between *decoloratus* and *quadricolor*, we have preferred the latter; not, we hope, out of undue partiality to our friend Mr. Dickson, but because it is the oldest, and at least as good as the other. The *granulosus* of his 4th fasciculus we believe to be a different plant.

July 1. 1803. Published by Jas Sowerby, London.

LICHEN sulphureus.

Sulphureous Lichen.

———o———

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered Warts.

Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust thick, cracked, rugged, dull sulphur-coloured. Shields convex, blackish, mealy, with a paler margin.

SYN. Lichen sulphureus. *Achar. Prod.* 58. *Dicks. Crypt. fasc.* 2. 17. *With v.* 4. 12. *Hull.* 286. *Relh.* 453. *Abbot.* 259.

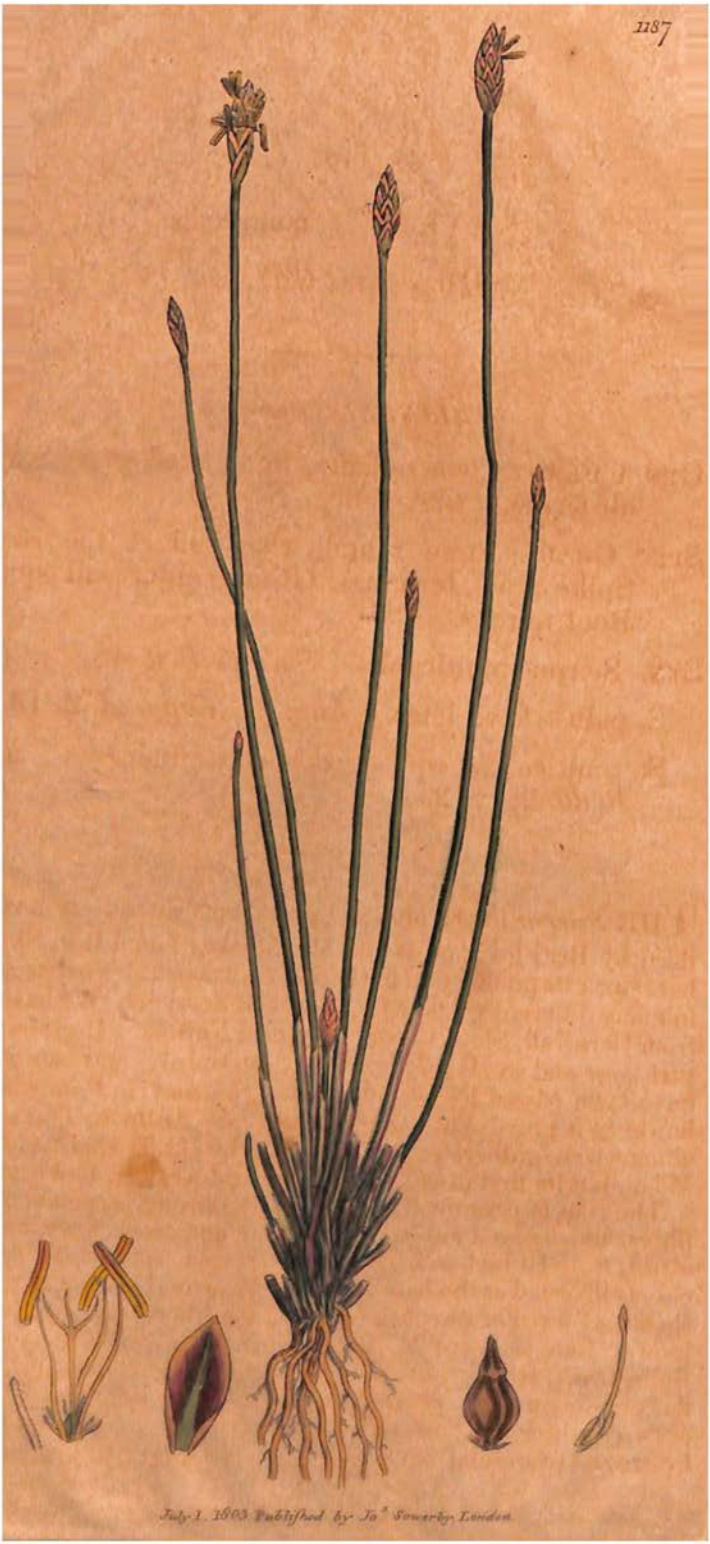
Verrucaria sulphurea. *Hoffm. Pl. Lich. v.* 1. 56. *t.* 11. *f.* 3.

———o———

IT is scarcely credible that this Lichen should have been considered as a variety of the *sanguinarius*, yet such was actually the case, till Professor Hoffman described it by the apt name of *sulphureus*. Leers guessed it to be the *calcareus* of Linnæus, an error as remarkable as the other.

It is often found on brick walls in open situations, and not unfrequently on rocks near the sea. The crust is thick, very rugged, uneven, and cracked, but not mealy, externally of a dull or greenish sulphur colour, spreading circularly, with a flat border, which becomes rugged and plaited by age. Internally the crust is whitish and chalky. The shields are numerous, clustered, variously shaped, convex, their border immersed in the crust and scarcely distinguishable from it; their disk blackish, covered with a fine mealiness which easily rubs off, as in *L. impolitus* and many others.

When growing on wood the crust is thinner and more inclined to be mealy, and the shields paler, of a yellowish waxy brown.



July 1. 1803 Published by Jas Sowerby, London.

SCIRPUS multicaulis.

Many-stalked Club-rush.

TRIANDRIA Monogynia.

GEN. CHAR *Glumes* chaffy, imbricated every way, all fertile. *Cor.* none. *Seed* 1.

SPEC. CHAR. Stem round, sheathed at the base. Spike ovate, terminal. Glumes obtuse, all equal. Root fibrous.

SYN. Scirpus multicaulis. *Sm. Fl. Brit.* 48.

S. palustris varietas. *Linn. Fl. Lapp. ed.* 2. 16.

S. multicaulis, equiseti capitulis minoribus. *Rel. Rudb.* 28. *f.* 2.

THE *Scirpus* in the annexed plate, though entirely unnoticed by British botanists till Mr. Mackay found it in Skye, has, since its publication in the *Fl. Britannica*, been detected in many different parts of England and Scotland. We have it from Cornwall, Sussex, Yorkshire, and Norfolk. It grows on turf bogs and wet commons, flowering in July, and can only have been passed by as the common *S. palustris*, from which however it proves on examination clearly distinct. Our specimens were gathered near Yarmouth by Mr. Turner and Mr. Wigg, but its first discoverer in England was Mr. E. Forster.

The root is perennial, formed of long strong perpendicular fibres, and does not creep. Stems very numerous, growing in a tuft, 8 or 10 inches high, simple, round, smooth, leafless, closely invested at the base with a single or double tight abrupt sheath, of a red or purplish colour, but without the numerous intermediate scales of *S. cæspitosus*, *t.* 1029. Leaves none. Spike erect, solitary, ovate, of a red or rusty brown, many-flowered. Glumes all of equal size, bluntish, imbricated. One or two of the lower flowers are often viviparous. The seed is brown and triangular, surrounded by a few short rough bristles.

July 1. 1803. Published by Jas. Sowerby, London.

AGROSTIS setacea.

Bristle-leaved Bent-grass.

———o———

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 acute valves, single-flowered. *Cor.* of 2 unequal membranous valves. *Stigmas* feathery.

SPEC. CHAR. Calyx lanceolate. Corolla with a bent awn from its base. Radical-leaves bristle-shaped.

SYN. Agrostis setacea. *Curt. Lond. fasc.* 6. *t.* 12. *Sm. Fl. Brit.* 79.

A. alpina. *With* 128. *Hull.* 18.

A. canina, β et γ. *Huds.* 30, 31.

A. mutabilis. *Sibth.* 36 ?

———o———

THE first knowledge we ever had of this grass was from the late Earl of Gainsborough, who brought it from Hampshire. Mr. Curtis mentions it as very common in the south-west counties. It grows on dry barren turfy heaths, flowering in July and August, and though probably eaten by sheep, is considered as an unimportant object of agriculture.

Roof fibrous, perennial. Stem 8 to 12 inches high, spreading, straight, simple, bearing one or two leaves. Radical leaves erect, numerous, glaucos, roughish, very narrow, the margin rolled in so to make them still narrower, and bristle-shaped: the stem leaves rather broader, especially in rich ground. Stipula oblong, white and thin, often torn. Panicle erect, lanceolate, subdivided, rough. Flowers lanceolate. Calyx-glumes very narrow, acute, nearly equal, rough, white or purplish. Corolla much shorter than the calyx, its larger valve cloven, furnished at the base with a bent rough awn, scarcely extended beyond the calyx: its lesser very minute, bearing a little tuft of hairs at the base.

AGROSTIS alba.

Marsh Bent-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 acute valves, single-flowered, *Cor.* of 2 unequal membranous valves. *Stigmas* feathery.

SPEC. CHAR. Panicle loose. Stem creeping. Calyx-valves equal, lanceolate, polished, rough at the keel.

SYN. Agrostis alba. *Linn. Sp. Pl.* 93. *Sm. Fl. Brit.* 81. *With.* 129. *Hull.* 18. *Relh.* 27. *Sibth.* 37. *Abbot.* 14.

A. polymorpha ζ, palustris. *Huds.* 32.

Gramen miliaceum majus, paniculâ spadiceâ, et paniculâ viridi. *Dill. in Raii Syn.* 404.

β Agrostis sylvatica. *Huds. ed.* 1. 28. *Linn. Sp. Pl.* 1665.

Gramen miliaceum sylvestre, glumis oblongis. *Dill. in Raii Syn.* 404.

NOT rare in ditches and marshy fields. The flowers appear in July. The root is perennial. Stems several, spreading, prostrate, or floating, often throwing out fibres from their lower joints; leafy about their middle; naked and smooth above. They vary from 1 to 3 feet in length. Leaves rough, with smooth sheaths. Stipula obtuse, often torn. Panicle loose and spreading, its branches repeatedly subdivided, roughish. Flowers lanceolate, polished, either white or of a purplish brown. Calyx-valves nearly equal, acute, their keel only rough. Corolla of 2 thin unequal valves, generally (but not invariably) destitute of an awn.

A. Sylvatica of Linnæus is a curious variety of this, whose corolla is greatly elongated, thickened, and almost of the texture of a leaf. The calyx also undergoes in some degree a similar change, and the lower branches of the panicle are drawn out and naked. It grows in shady places. Other species of *Agrostis* are subject to the same kind of change.

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107.

July 1 1803 Published by Jas Sowerby London

AIRA canescens.

Grey Hair-grass.

—o—

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, 2-flowered. *Cor.* of 2 valves. *Florets* without any imperfect one between them.

SPEC. CHAR. Leaves slender and tapering. Stem leafy. Panicle dense. Awns swelling upwards, scarcely longer than the calyx.

SYN. Aira canescens. *Linn. Sp. Pl.* 97. *Sm. Fl. Brit.* 86. *Huds.* 36. *With.* 137. *t.* 24. *Hull.* 20. *Dicks. Dr. Pl.* 4.

Gramen miliaceum maritimum molle. *Dill. in Raii Syn.* 405.

—o—

A NATIVE of sandy pastures near the sea, but we know not that it has been found on any other than the eastern coasts. On Yarmouth Deanes it abounds, as well as in similar stations on the opposite Dutch shore. It flowers in July and August, and is perennial.

The roots consist of long capillary fibres, and produce thick tufts of upright, stiff, bristle-shaped, glaucous leaves, often tinged with a purplish hue, evidently rough when examined with a microscope. Among these spring up several stems, various in height and direction, with many bent reddish joints in their slender lower part, the upper invested with the long sheaths of 2 or 3 leaves. The naked part of the stem is smooth. The stipulæ are lanceolate. The panicle is dense, erect, much branched, rather inclining to one side, of a glaucous silvery hue, tinged with purple. Calyx-glumes sharp and rough, longer than the florets. Florets with a tuft of hair at their base, and one of them raised on a little stalk. Awn from the base of the outer petal, of a very singular construction, its lower half being twisted, of a tawny hue, and crowned with a tuft of minute bristles; its upper straight, white, and more or less club-shaped. The purple antheræ add much to the beauty of the panicle.

Conium
maculatum.

CONIUM maculatum.

Common Hemlock.

—o—

PENTANDRIA Digynia.

GEN. CHAR. *Partial involucra* of about 3 leaves, all on one side. *Fruit* ovate, swelling, with 5 ribs on each side, which are waved before the seed is ripe. *Petals* uniform.

SPEC. CHAR. Seeds without prickles. Stem much branched, polished and spotted.

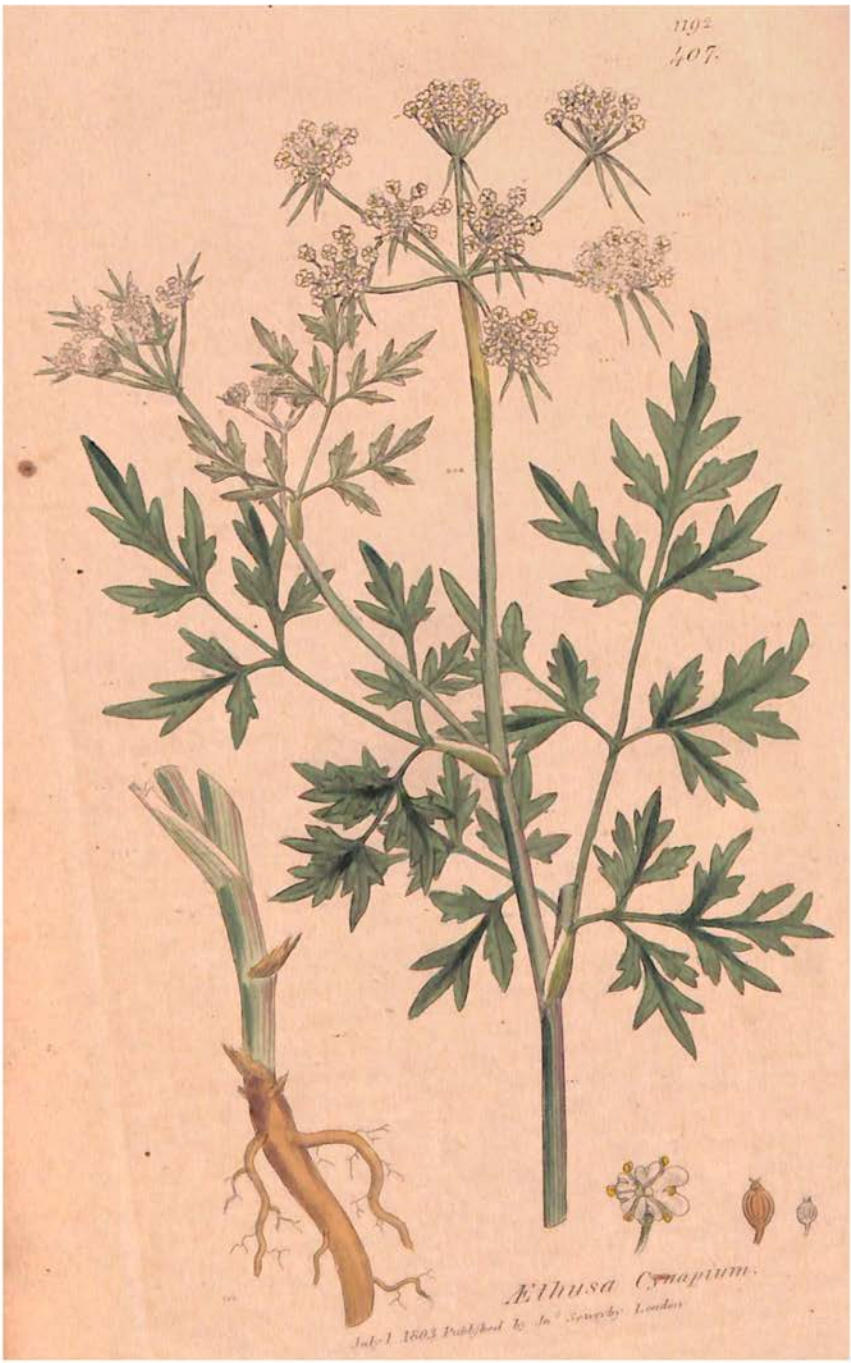
SYN. Conium maculatum. *Linn. Sp. Pl.* 349. *Sm. Fl. Brit.* 302. *Huds.* 115. *With.* 292. *Hull.* 60. *Relh.* 110. *Sibth.* 94. *Abbot.* 60. *Curt. Lond. fasc.* 1. *t.* 17. *Woodv. Med. Bot. t.* 22.

Cicuta. *Raii Syn.* 215.

—o—

HEMLOCK grows very generally on banks, dunghills and waste ground, and every body is supposed to know it; yet various things are often mistaken for it, and such mistakes are not unimportant when they regard medicinal plants. The smooth shining spotted stem should be particularly attended to, as well as the shape of the fruit. It is also worthy the notice of herb-gatherers in general, that, with respect to *umbelliferous plants*, the most fatal are such as grow in watery places. Hemlock is one of the most active of those found on dry ground; yet it is too nauseous to be swallowed in any dangerous quantity. Its virtues in a proper dose are narcotic and sedative.

The root is fleshy, biennial. The flowers appear in June and July, and the tall upright hollow stem, with its spreading branches laden with umbels of seeds, is conspicuous about hedges in autumn. Leaves repeatedly pinnate and sharply notched, of a deep shining green, fœtid when bruised. Flowers white. General involucrum of several short ovate leaves; partial of 3 or 4 narrower ones all placed on one side of the partial umbel. Petals curved inwards, all nearly of equal size. Fruit ovate, furrowed, smooth.



Æthusa Cynapium.

July 1 1803 Published by Jas Sowerby London

ÆTHUSA Cynapium.

Fool's Parsley.

———o———

PENTANDRIA Digynia.

GEN. CHAR. *General involucrum* none: *partial* of 3 leaves all on one side, pendulous. *Fruit* striated.

SPEC. CHAR. Leaves all uniform.

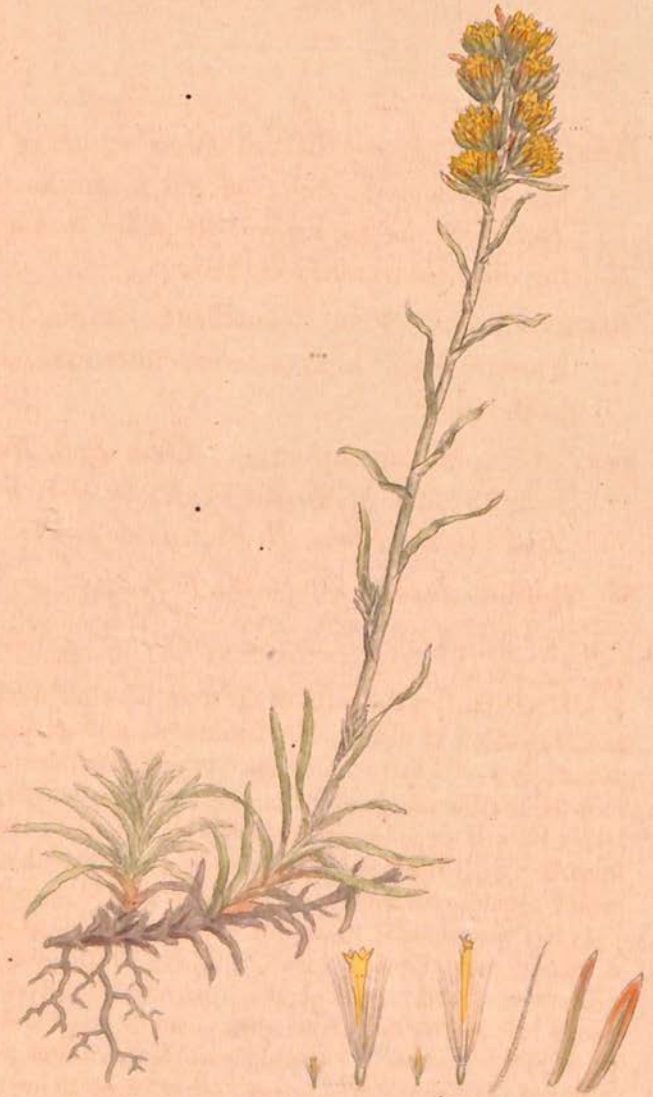
SYN. Æthusa Cynapium. *Linn. Sp. Pl.* 367. *Sm. Fl. Brit.* 323. *Huds.* 123. *With.* 304. *Hull.* 62. *Relh.* 118. *Sibth.* 99. *Abbot.* 65. *Curt. Lond. fasc.* 1. *t.* 18.

Cicutaria tenuifolia. *Raii Syn.* 215.

———o———

FOOL'S PARSLEY, or Lesser Hemlock, has many botanical characters in common withe the *Conium* described in our last plate, but its much smaller size, broader leaves, unspotted stem, and the want of a general involucrum preclude all possibility of mistake between them. The plant now before us is much more likely to be mistaken for Garden Parsley, as being a common weed in the gardens and fields, and bearing a great resemblance to that useful herb. To distinguish them, the dark dull green of the Fool's Parsley must be observed, and its nauseous garlic scent, instead of the pleasant aromatic flavour of the other. When the umbels appear, the long pendulous leaves of the partial involucrum at once distinguish the *Æthusa*. We are not sure of the very poisonous qualities attributed by some to this plant, but it is at least unwholesome, as well as unpleasant, and by no means eligible for food or medicine.

It is annual, flowering in July and August. The stem round, slender, about a foot high, slightly striated, branched and leafy. Leaves smooth, doubly pinnate; leaflets oblong, decurrent and cut. Umbels on long stalks, flattish. Flowers white. Petals a little unequal or radiant. Fruit ovate, swelling, striated. The stem has often a violet tinge, but is not spotted.



Gnaphalium supinum.

July 1 1803 Published as the Act directs by Jas Sowerby London

GNAPHALIUM supinum.

Dwarf Cudweed.

SYNGENESIA Polygamia-superflua.

GEN. CHAR. *Recept.* naked. *Down* rough or feathery. *Cal.* imbricated; with coloured membranous scales. *Florets* of the radius awl-shaped. Some *florets* of the disk occasionally abortive.

SPEC. CHAR. Stem decumbent, simple, racemose. Flowers few. Leaves linear-lanceolate, downy on both sides.

SYN. Gnaphalium supinum. *Linn. Syst. Nat. ed.* 12 *v.* 3. 234. *Sm. Fl. Brit.* 871. *Huds.* 361. *With.* 714. *Hull.* 183. *Dicks. H. Sicc. fasc.* 2. 17.

G. alpinum. *Lightf.* 470. *t.* 20. *f.* 2.

FOUND on the summits of the Scottish alps in a micaceous soil, flowering in July. Mr. Lightfoot, not adverting to the description of this plant in the appendix to the *Syst. Nat.*, took it, with some hesitation, for *G. alpinum* of Linnæus, a species much more resembling the *dioicum*, and not yet noticed in Britain. Linnæus for some time neglected the plant now under consideration, as a dwarf variety of *G. sylvaticum*.

It has a perennial creeping blackish root. Stems 2, 3, or 4 inches long, simple, slender, leafy, a little woolly, seldom quite erect, and often nearly prostrate. Leaves alternate, linear-lanceolate, entire, narrow, more or less woolly on both sides. Flowers few, in a simple loose leafy cluster; sometimes in dwarf plants solitary; erect, rather larger than in *G. sylvaticum*, *t.* 913, or *rectum*, *t.* 124; the calyx-scales are also longer, sharper, and of a paler more uniform brown than in those species. Florets all fertile. Seeds compressed, polished. Receptacle reticulated.

July 1 1805 Published by Jas Sowerby London

GNAPHALIUM uliginosum.

Marsh Cudweed.

SYNGENESIA Polygamia-superflua.

GEN. CHAR. *Recept.* naked. *Down* rough or feathery. *Cal* imbricated; with coloured membranous scales. *Florets* of the radius awl-shaped. Some *florets* of the disk occasionally abortive.

SPEC. CHAR. Stem much branched, spreading. Flowers in terminal tufts.

SYN. Gnaphalium uliginosum. *Linn. Sp. Pl.* 1200. *Sm. Fl. Brit.* 872. *Huds.* 361. *With.* 715. *Hull.* 183. *Relh* 324. *Sibth.* 251. *Abbot.* 180. *Dicks. H. Sicc. fasc.* 2. 18.

G. longifolium humile ramosum capitulis nigris. *Raii Syn.* 181.

THIS species of *Gnaphalium* is easily to be found on sandy wet commons, where water has stood in winter, and is not less easily known from every other of British growth. Its very numerous spreading branches, each terminated by a dense head of yellowish-brown shining flowers, encompassed with many leaves, mark it sufficiently.

The root is small and annual. Stem about a span high, branched from the bottom, its branches spreading in all directions, but erect at their extremities, alternately subdivided, leafy, clothed with very white cottony down. Leaves alternate, linear-lanceolate, taper at their base, woolly on both sides, but less so than the stem. The flowers appear in August. The calyx-scales are lanceolate, acute, of a pale yellowish brown. Florets all fertile, yellow. Receptacle reticulated.

Conyza squarrosa.

CONYZA squarrosa.

Plowman's Spikenard.

———o———

SYNGENESIA Polygamia-superflua.

GEN. CHAR. *Recept.* naked. *Down* rough. *Calyx* imbricated, roundish. *Florets* of the radius three-cleft.

SPEC. CHAR. Leaves ovato-lanceolate, downy. Stem herbaceous, corymbose. Calyx-scales leafy, recurved and prominent.

SYN. Conyza squarrosa. *Linn. Sp. Pl.* 1205. *Sm. Fl. Brit.* 875. *Huds.* 363. *With.* 717. *Hull.* 183. *Relh.* 325. *Sibth.* 251. *Abbot.* 180.

Baccharis monspeliensium. *Raii Syn.* 179.

———o———

A FREQUENT plant on dry, chalky, limestone, or marly soils, but not on gravel. It often occurs in shady situations, sometimes in sunny ones, but seems to require shelter from cold winds. It flowers in July and August.

Root biennial, branched and fleshy. The whole herb is soft and downy; in flavour bitter and somewhat aromatic, with a portion of mucilage. Stem upright, 2 or 3 feet high, angular, leafy. Leaves of a broad lanceolate figure, veiny, soft; the radical ones large, tapering at the base, crenate; the rest smaller, and often entire. Flowers numerous, in a terminal leafy corymbus or panicle. Calyx ovate; its outer scales with recurved green leafy tips; the inner erect, reddish, fringed. Florets yellow; those of the disk regular, tubular; those of the radius ligulate, 3-cleft at the tip, without stamina; all fertile. Seeds obovate, angular. Receptacle tuberculated.

The radical leaves bear some resemblance to those of Foxglove.

Aug.st 1 1803 Published by Ja.s Sowerby London

INULA pulicaria.

Small Fleabane.

———o———

SYNGENESIA Polygamia-superflua.

GEN. CHAR. *Recept.* nearly naked. *Down* simple. *Cal.* imbricated. *Florets* of the disk very numerous, linear. *Antheræ* with 2 bristles at the base.

SPEC. CHAR. Leaves clasping the stem, waved. Stem much branched, hairy. Flowers hemispherical, with a very short radius.

SYN. Inula pulicaria. *Linn. Sp. Pl.* 1238. *Sm. Fl. Brit.* 892. *Huds.* 369. *Relh.* 331. *Abbot.* 184. *Curt. Lond. fasc.* 3. *t.* 57. *Dicks. H. Sicc. fasc.* 7. 13.

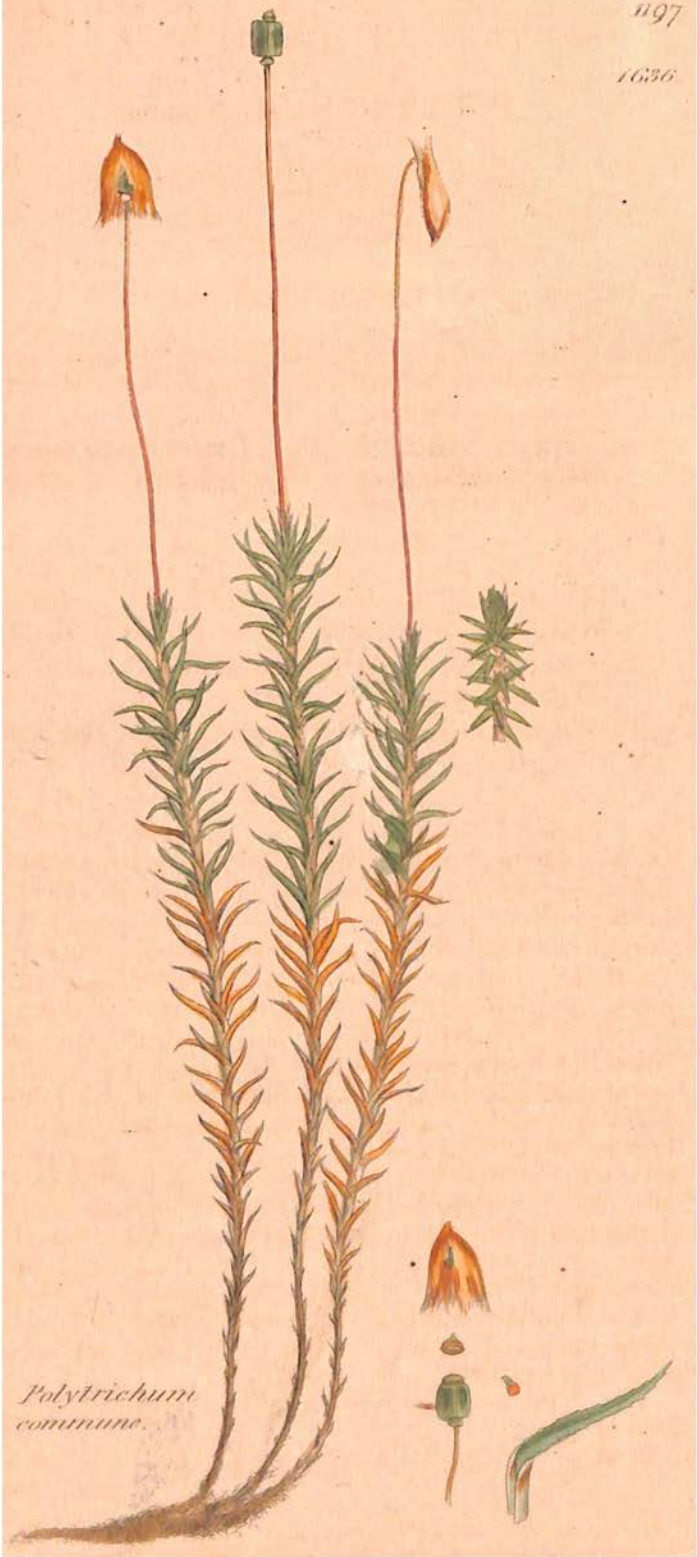
I. uliginosa. *Sibth.* 256.
I. cylindrica. *With.* 731. *Hull.* 185.
Conyza minor. *Raii. Syn.* 174.

———o———

FOUND, not unfrequently, on moist sandy heaths and commons, where water has stagnated during winter. It is an annual plant, flowering late in autumn.

We have sought in vain for any solid differences between this and *I. pulicaria* of the Linnæan herbarium, notwithstanding the opinions of Dr. Withering and Dr. Sibthorp. The root is tapering and branched. Stem generally erect, but often spreading or decumbent, branched, many-flowered, zigzag, angular, hairy, and leafy. Leaves slightly embracing the stem, lanceolate or oblong, waved, recurved, entire or very slightly toothed, hairy on both sides. Flowers solitary at the end of each branch, soon overtopped by other branches, erect, hemispherical, of a dull pale yellow. Calyx of numerous, linear, nearly equal, hairy scales. Florets of the radius mostly numerous, but very short, reaching very little beyond the calyx, recurved, and 3-toothed. Receptacle tuberculated. Seeds rough, crowned with a few rough rigid bristles, with a few short scales surrounding them.

1636



POLYTRICHUM commune.

Common Hair-moss.

———o———

CRYPTOGAMIA Musci.

GEN. CHAR. *Outer fringe* of 32 or 64 short incurved teeth; *inner* a flat undivided membrane. *Veil* generally double; the *outer* hairy.

SPEC. CHAR. Stem simple. Leaves linear-lanceolate, finely serrated, acute. Capsule erect, quadrangular, standing on a roundish pedestal.

SYN. Polytrichum commune. *Linn. Sp. Pl.* 1573. *Hedw. Sp. Musc.* 88. *Menz. Tr. of Linn. Soc. v.* 4. 74. *Huds.* 469. *With.* 795. *Hull.* 247. *Relh.* 415. *Sibth.* 305. *Abbot.* 232. *Dicks. H. Sicc. fasc.* 17. 19?

P. quadrangulare vulgare, Juccæ foliis serratis. *Dill. Musc.* 420. *t.* 54. *f.* 1.

P. vulgare et majus, capsulâ quadrangulari. *Raii Syn.* 90.

———o———

THIS, the most magnificent of all our mosses properly so called, is also one of the most common. It grows abundantly in shady woods and moist heaths, in a black boggy soil, producing its fruit-stalks in March, and ripening the capsules about May and June. The roots are perennial, long and hairy. Stems forming tufts; erect, simple, from 2 or 3 inches to 8 or 10 in height, thickly clothed with sheathing, linear-lanceolate, acute, finely serrated, spreading leaves, of a full shining green: the old ones permanent, turning brown. Male flowers terminal, star-like, encompassed with membranous and whitish-edged leaves; the stem continued through the centre after flowering. Capsule on a separate plant, solitary, square, green till quite ripe, standing on a fleshy *apophysis* or pedestal, which crowns the long erect terminal red fruit-stalk. Lid with a short beak, and a beautiful red margin. Fringe of 64 minute incurved teeth, to whose points the broad flat internal membrane is slightly attached. Veil double; the outer a congeries of long shining brown hairs.

The stems are in some countries used to make a neat kind of broom.

Aug.t 1 1803 Published by Ja.s Sowerby London

POLYTRICHUM attenuatum.

Slender Hair-moss.

———o———

CRYPTOGAMIA Musci.

GEN. CHAR. *Outer fringe* of 32 or 64 short incurved teeth: *inner* a flat undivided membrane. *Veil* generally double: the *outer* hairy.

SPEC. CHAR. Stem simple. Leaves linear-lanceolate, spreading, serrated, acute. Capsule quadrangular, drooping, contracted at the base, without a pedestal.

SYN. Polytrichum attenuatum. *Menz. Tr. of Linn. Soc. v.* 4. 72. *t.* 6. *f.* 2.

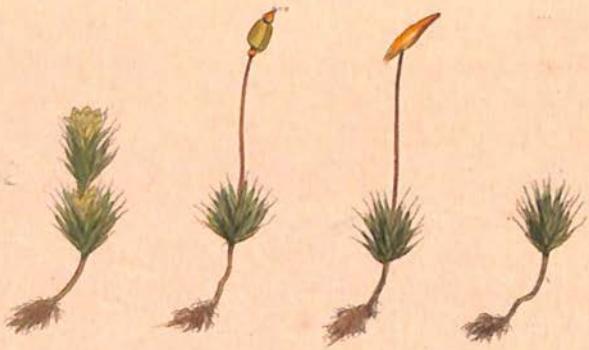
P. formosum. *Hedw. Sp. Musc.* 92. *t.* 19. *f.* 1, a.

———o———

OBSERVED by Mr. Sowerby in April, 1800, on Sydenham Common, Kent, for the first time, we believe, in Britain.

This elegant species has apparently been long overlooked as not different from *P. commune*, for it appears not to be very rare. It nevertheless clearly differs from the preceding in having a drooping and somewhat longer capsule, contracted at the base, but destitute of a proper fleshy *apophysis*. Its leaves are more spreading and recurved; their serratures more distinct and cartilaginous. The stems do not seem ever to grow to the height which those of *P. commune*, sometimes do. Like that species, the capsule and its lid are beautifully edged with red. The fringe consists of 64 little white teeth. The hairy outer veil is rather yellower than in the former.

Dr. Hedwig appears not to have seen Mr. Menzie's excellent treatise on this genus in the Linnæan Transactions.



Polytrichum piliferum

Aug.1 1803 Published by Jas. Sowerby London

POLYTRICHUM piliferum.

Bristle-leaved Hair-moss.

———o———

CRYPTOGAMIA Musci.

GEN. CHAR. *Outer fringe* of 32 or 64 short incurved teeth: *inner* a flat undivided membrane. *Veil* generally double: the *outer* hairy.

SPEC. CHAR. Leaves lanceolate, rigid, entire, tipped with a white hair. Capsule quadrangular, on a depressed pedestal.

SYN. Polytrichum piliferum. *Schreb. Fl. Lips.* 74. *Menz. Tr. of Linn. Soc. v.* 4. 75. *Hedw. Sp. Musc.* 90. *Hull.* 247. *Sibth.* 306. *Ehrh. Crypt.* 92.

P. commune, γ. *Linn. Sp. Pl.* 1573. *Huds.* 470. *With.* 796.

P. quadrangulare minus, Juniperi foliis pilosis. *Hull. Musc.* 426. *t.* 54. *f.* 3.

———o———

COMMON on dry mountainous sandy heaths and open places, which are enlivened in the winter and early spring by its red protruding veils and crimson stalks, elegantly contrasted with the dark leaves.

The roots are long and downy, deeply fixed in the earth. Stems simple, or according to the remark of Dr. Schwaegrichen (the learned editor of Hedwig) sometimes branched. They are scarcely more than half an inch or an inch high. Their summit is thickly clothed with deep-green, lanceolate, revolute, entire leaves, each tipped with a slender white hair, longest and most waved in the upper ones. Fruit-stalk an inch or somewhat more in length, rigid, deep-red. Capsule ovate, quadrangular, erect, green, standing on a depressed fleshy pedestal of a dark red. Lid conical. Outer veil brownish with a red or golden tinge.

If there be any certainty of species among Mosses at all, we conceive this must be distinct from *P. commune*, and that the characters above noted in the leaves are sufficient to discriminate them, without adverting to their totally different size, habit and appearance.

1633.

Polytrichum juniperinum

Aug.t 1. 1803. Published by Jas. Sowerby, London.

POLYTRICHUM juniperinum.

Juniper-leaved Hair-moss.

———o———

CRYPTOGAMIA Musci.

GEN. CHAR. *Outer fringe* of 32 or 64 short incurved teeth: inner a flat undivided membrane. *Veil* generally double: the *outer* hairy.

SPEC. CHAR. Leaves linear-lanceolate, pointed, entire; their margins inflexed. Capsule quadrangular, on a flat pedestal.

SYN. Polytrichum juniperinum *Menz. Tr. of Linn. Soc. v.* 4. 76. *t.* 6. *f.* 4. *Hedw. Sp. Musc.* 89. *t.* 18. *f.* 6—10. *Relh.* 415. *Sibth* 306. *Abbot.* 232. *Ehrh. Crypt.* 82. *Pl. Off.* 180.

P. commune, *β. Linn. Sp. Pl.* 1573. *Huds.* 469. *With.* 795.

P. quadrangulare, juniperi foliis brevioribus et regidioribus. *Hill. Musc.* 424. *t.* 54. *f.* 2.

———o———

ABOUT as common as the last in heathy mountainous places, ripening its fruit in April. We gathered these specimens on Hampstead heath.

The stem is rather taller than that of *P. piliferum*, and the whole plant larger. Leaves dark-green, spreading, acute but not bearded; their margin entire; and instead of being revolute as in the last, it is on the contrary folded in nearly flat upon the disk. Such marks when they occur render the study of Natural History truly delightful from its mathematical truth as well as its other charms. The fruit-stalk is 2 or 3 inches long, rigid, bright-red. Capsule erect, quadrangular; its pedestal very much depressed, and of the fine red colour of the stalk. Fringe and lid much like the last. Veil tawny, tipped with brown.

We have lately verified the synonym of Dillenius by examining his herbarium.

Laurencia obtusa?

Aug.t 1 1803 Published by Ja.s Sowerby London.

FUCUS obtusus.

Obtuse Fucus.

———o———

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond cartilaginous, thread-shaped, compressed, twice or thrice pinnate; ultimate branches nearly opposite, spreading, obovate, very obtuse, bearing the seeds.

SYN. Fucus obtusus. *Huds.* 586. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 191. *Turn. Syn.* 43. *With. v.* 4. 119. *Hull.* 324. *Velley. t.* 3.
F. spinosus. *Wulf. in. Jacq. Coll. v.* 3. 156. *t.* 15. *f.* 1.

———o———

WE have received specimens of this pretty and uncommon Fucus from Ireland, by favour of Mr. Templeton of Orange Grove near Belfast. Its delicate light red colour is said to be very fugitive. The plant itself is annual, and not of long duration, perfecting its seeds in summer. It has been observed on the south and west coasts of England only.

Several stems, various in length and luxuriance, arise from one small callous root, and are at most 6 inches high, being twice or thrice compound, the branches opposite, rarely ternate, their subdivisions pinnate; the ultimate ones generally opposite, obovate or wedge-shaped, very blunt and abrupt, pale and flat at their extremities. The substance of the whole is firm, the stem and branches linear, or rather thread shaped, slightly flattened. The seeds are in clusters, forming a very dark red spot in the centre of the dilated extremity of each of the ultimate divisions or lobes of the frond.

55389

Laurencia pinnatifida?

Aug.t 1 1803. Published by Ja.s Sowerby, London.

FUCUS pinnatifidus.

Pinnatifid Fucus.

———o———

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond cartilaginous, branched; branches mostly alternate, doubly pinnatifid, cut into short blunt callous teeth, which bear the sessile ovate tubercles.

SYN. Fucus pinnatifidus. *Huds.* 581. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 167. *Turn. Syn.* 267. *With. v.* 4. 106. *Hull.* 321. *Lightf.* 953. *Stackh. Ner. t.* 11.

F. multifidus. *Huds.* 581.

F. filicinus. *Lightf.* 954.

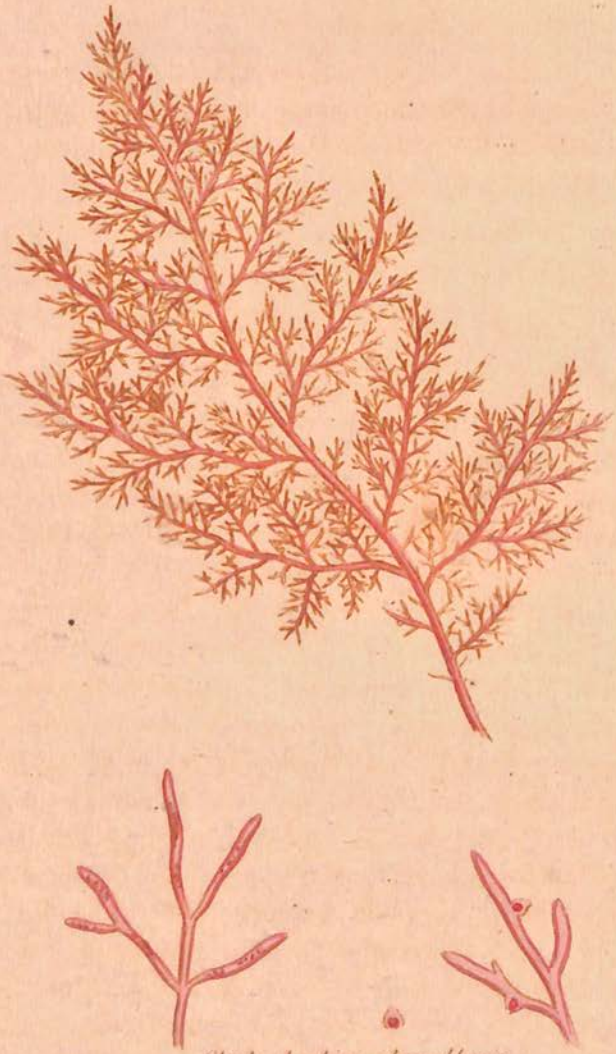
F. Dealensis, Pedicularis rubræ folio. *Dill. in Raii Syn.* 48.

F. ramosus, piperis sapore. *Dill. in Raii Syn.* 51.

———o———

THIS is found on various parts of the coast, and known in Scotland, where it is frequently eaten, by the name of Pepper Dulse, from its pungent flavour. We have received specimens from Mr. Travis, Mr. Templeton, the Rev. Mr. Davies, and other friends. It is supposed to be annual, fructifying in autumn.

The front varies in the breadth of its segments (see *Gmel. t.* 16. *f.* 2 & 3.), hence authors have made two or more species out of what a little observation would have taught them to be but one. Its height is 2 or 3 inches, its substance firm but succulent, the colour a purplish brown. The root is branched, Frond flat, once or twice pinnate; the branches numerous, alternate, scarcely opposite, pretty regularly pinnatifid or toothed. The more obtuse and callous teeth bear the fructification in sessile almost globular tubercles, full of dark-red seeds. Dr. Goodenough and Mr. Turner have in their different works admirably illustrated this species.



Chylocladia clavellosa

Aug.t 1 1803. Published by Ja.s Sowerby, London

FUCUS clavellosus.

Stone-crop Fucus.

———o———

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond thread-shaped, tender, repeatedly branched; branches mostly alternate, somewhat two-ranked: the ultimate ones even, rather tumid, blunt. Tubercles lateral, inversely urn-shaped.

SYN. Fucus clavellosus. *Turn. Tr. of Linn. Soc. v.* 6. 133. *t.* 9. *Syn.* 373.

———o———

FOR the knowledge of this Fucus, as well as for the specimen figured in our plate, we are obliged to Mr. Turner, who has found it on the beach at Brancaster and Yarmouth, Norfolk, bearing its fruit in July and August, being undoubtedly but of annual duration. Sir T. Frankland has often observed it at Scarborough.

It is next allied to *F. kaliformis*, *v.* 9. *t.* 640, but has never like that species any jointed appearance, nor, according to Mr. Turner, any disposition to be whorled, neither are the tubercles globular, but inversely urn- or top-shaped, larger, and growing more sparingly, than in the *kaliformis*. We find them often axillary, but not universally so. The whole size of the plant is smaller than in *kaliformis*. Its colour is a fine pale pink. The frond is much and repeatedly branched, generally in an alternate manner; the little ultimate branches somewhat club-shaped and obtuse. A little cluster of dark-red seeds is observable in the centre of each tubercle, which, when the tubercle disperses them, are found scattered over the branch, an usual circumstance in this tribe.

164.

Avena pratensis.

Aug.st 1 1805. Published by Jas. Sowerby, London.

AVENA pratensis.

Narrow-leaved Oat-grass.

———o———

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing several florets. Outer valve of the *corolla* bearing a twisted awn on its back.

SPEC. CHAR. Spike erect. Calyx containing about five florets. Receptacles hairy. Leaves involute, finely serrated, naked.

SYN. Avena pratensis. *Linn. Sp. Pl.* 119. *Sm. Fl. Brit.* 141. *Huds.* 52. *With.* 165. *Hull.* 26. *Relh.* 42. *Sibth.* 49. *Abbot.* 24. *Lightf.* 105.

A. bromoides. *Linn. Sp. Pl.* 1666.

Gramen avenaceum montanum, spicâ simplici, aristis recurvis. *Raii Syn.* 405. *t.* 21. *f.* 1.

———o———

A NATIVE of dry chalky or limestone pastures and heaths, where it flowers in July.

Root perennial, fibrous, downy, bearing many tufts of rigid, smooth, linear leaves, whose edges are rolled in, and finely serrated, and whose broad sheathing bases are of long continuance. The stems are few, 12 or 18 inches high, erect, stiff, with one joint only, which is near the bottom, and clothed in their lower part with the long sheaths of 2 or 3 broad short leaves. The flowers grow erect, in an upright, mostly unbranched, spike, rather than a panicle; but the stalks of the lowermost are generally, one or more of them, lengthened out in some degree; the rest are very short or none at all. Calyx-valves narrow and sharp, nearly equal. Florets 4 or 5; their stalks within the calyx hairy; their outer husks purplish, with a membranous point, and bearing from their backs a purplish twisted awn, nearly twice their own length: their inner husk is finely fringed.

Linnæus by the mistake of Gouan was led to describe this grass a second time under the name of *A. bromoides*.

Hordeum maritimum.

HORDEUM maritimum

Sea Barley. Squirrel-tail Grass.

———o———

TRIANDRIA Digynia.

GEN. CHAR. *Calyx* lateral, of 2 valves, containing a single flower, and growing 3 together.

SPEC. CHAR. Lateral florets male, with shorter awns; their inner husk half-ovate.

SYN. Hordeum maritimum. *Sm. Fl. Brit.* 156. *With.* 172. *Hull.* 28. *Relh.* 47. *Mart. Rust. t.* 44.

H. marinum *Huds.* 57. *Dicks. H. Sicc. fasc.* 5. 4.

Gramen secalinum polustre et maritimum. *Raii Syn.* 392.

———o———

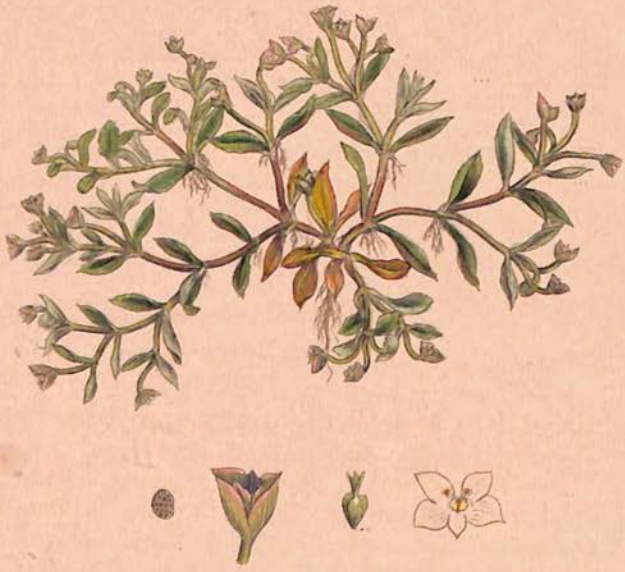
HUDSON has very clearly distinguished this grass, which is confined to pastures near the sea, from the *H. murinum*, so common every where by road-sides and path-ways. We cannot therefore but wonder at their being confounded in the *Flora Londinensis*, where every thing related of the Squirrel-tail Grass under *H. murinum*, belongs to the *maritimum*.

The present species is annual, flowering in June and July. Root fibrous. Stems several, spreading at the base with bent joints, straight above, leafy and smooth. Leaves smooth, of a light, somewhat glaucous green. Spikes terminal, solitary, pyramidal, dense, of numerous sessile flowers, on a jointed common stalk, which becomes very brittle as the seeds ripen. The flowers or florets stand 3 together in a common calyx, formed of 3 pairs of rough bristly awns, of which the internal one of each outermost pair is singularly dilated at the base into a half-ovate figure; which circumstance abundantly distinguishes the species.

The rough awns are said to be pernicious to horses, where this grass makes a portion of their hay, by sticking in their gums and producing irritation. See Curtis, *fasc.* 5, under *t.* 9.

1206

1.91.



Montia fontana.

Aug.t 1. 1803 Published by Ja.s Sowerby, London.

MONTIA fontana,

Water Chickweed, or Blinks.

———o———

TRIANDRIA Trigynia.

GEN. CHAR. *Cal.* of 2 leaves. *Cor.* of 1 irregular petal. *Caps.* with 1 cell, 3 valves, and 3 seeds.

SPEC. CHAR. . . . . .

SYN. Montia fontana. *Linn. Sp. Pl.* 129. *Sm. Fl. Brit.* 161. *Huds.* 60. *With.* 175. *Hull.* 29. *Relh.* 49. *Silth.* 53. *Abbot.* 28. *Curt. Lond. fasc.* 3. *t.* 8.
Alsine parva palustris tricoccos portulacæ aquaticæ similis. *Raii Syn.* 352.

———o———

COMMON in small rills and plashy spots, especially on a gravelly soil, flowering in April and May.

The root is annual, small and fibrous. Stem much branched from the very base, prostrate in the lower part, and (as we have observed respecting some other annual plants) frequently taking root at the joints. Leaves opposite, spatulate, entire. Flowers small, white, expanding at eleven o'clock for about an hour, but only in the brightest sunshine, and standing on clustered stalks about the ends of the branches. Corolla in 5 unequal segments. Stamina shorter than its border. Styles 3, united at their base. Capsule of 3 valves, but of only one cavity, containing 3 large black kidney-shaped seeds. The valves of the capsule at length become rolled into a cylindrical form. The whole plant is smooth and somewhat succulent. It is not known to be of any particular use. *Elatine Hydropiper*, figured in our 14th volume, *t.* 955, is the only British plant at all resembling it.

Micheli's name of *Montia* was retained by Linnæus, in preference to *Cameraria* previously given to this genus by Dillenius, because Plumier had already given the latter name to an American plant more worthy to commemorate so great a botanist as Camerarius.

Ligusticum scoticum.

Sept.r 1. 1803. Published by Ja.s Sowerby, London.

LIGUSTICUM scoticum.

Scottish Lovage.

PENTANDRIA Digynia.

GEN. CHAR. *Involl.* general and partial. *Fruit* oblong, with 3 ribs on each side. *Corolla* uniform. *Petals* rolled in, entire. *Cal.* of 5 teeth.

SPEC. CHAR. Leaves twice ternate.

SYN. Ligusticum scoticum. *Linn. Sp. Pl.* 359. *Sm. Fl. Brit.* 309. *Huds.* 117. *With.* 296. *Hull.* 62. *Lightf.* 159. *Fl. Dan. t.* 207.

L. Scoticum, apii folio. *Raii Syn.* 214.

FOR wild specimens of this rare plant we are obliged to our worthy friend Alexander M'Leay, Esq., Secretary to the Linnean Society, who gathered them among rocks on the shore near Wick in Caithness, the northern extremity of Britain, in August last. We have formerly observed the same about the Frith of Forth, and Lightfoot mentions it as frequent on the shores of the Western Islands. In Skye it is called *Shunis*, and is eaten both in a crude and boiled state. We suspect our southern epicures would not thank us for its introduction among them, the whole plant, though aromatic, being highly acrid, and to our taste nauseous in a great degree.

The root is tap-shaped, very warm and pungent. Stem upright, leafy, a little branched at the top, striated, smooth. Leaves alternate, doubly ternate, the uppermost only simply so; the leaflets broad, somewhat rhomboid, acute, fleshy, smooth, dark-green; entire at the base, deeply serrated in the upper part. Common footstalk winged at the base, mostly purplish. Umbels terminal, large, erect, smooth. General involucrum of 4 or 5 lanceolate leaves; partial of several smaller ones. Petals regular, slightly reddish. Fruit longer and more distinctly winged than in *L. cornubiense*, *t.* 683.

Fœnioulum vulgare.

Sept.r 1 1803. Published by Jas. Sowerby London.

ANETHUM Foeniculum.

Common Fennel.

PENTANDRIA Digynia.

GEN. CHAR. *Invol.* none. *Fruit* ovate, slightly compressed, striated. *Petals* rolled in, entire.

SPEC. CHAR. Fruit swelling. Stem-leaves numerous, curved downwards.

SYN. Anethum Foeniculum. *Linn. Sp. Pl.* 377. *Sm. Fl. Brit.* 329. *Huds.* 126. *With.* 310. *Hull.* 64. *Relh.* 121. *Abbot.* 67. *Woodv. Med. Bot. t.* 160. Foeniculum vulgare. *Raii Syn.* 217.

VERY plentiful about the chalk-pits of Kent and other counties, flowering in July and August, when its golden umbels, contrasted with its dark leaves, form a striking object.

The root is biennial, tap-shaped. Herb smooth, of a deep, but glaucous, green. Stem 4 feet high, erect, round, hollow, much branched, striated. Leaves triply pinnate, their leaflets very narrow, awl-shaped, long, and more or less pendulous. Umbels terminal, large, of many even-topped rays. Calyx obsolete. Petals deep-yellow, rolled in, furrowed, entire. Unripe germen obtuse, crowned with a thick yellow glandular substance the base of the styles. Stamina spreading and recurved, yellow. Fruit ovate, swelling, scarcely compressed, furrowed, with 3 ribs on each side.

This is the common garden Fennel, whose leaves are used both for ornament and food, and whose seeds are useful as a carminative medicine, particularly for young children. Their flavour is sweet, and to most people gratefully aromatic.

Sept.r 1 1803 Published by Jas Sowerby London

PIMPINELLA dioica.

Dwarf Burnet-Saxifrage.

PENTANDRIA Digynia.

GEN. CHAR. *Invol.* none. *Fruit* ovate-oblong, striated. *Petals* inflexed. *Stigmas* somewhat globular.

SPEC. CHAR. Leaflets all nearly linear. Umbels panicled. Flowers dioecious.

SYN. Pimpinella dioica. *Linn. Syst. Veg. ed.* 13. 241. *Sm. Fl. Brit.* 332. *Huds.* 128. *With.* 313. *Hull.* 65.

Seseli pumilum. *Linn. Sp. Pl.* 373.

Peucedanum minus. *Raii Syn.* 217. *Huds. ed.* 1. 101.

THIS species of *Pimpinella* has, in Britain at least, been found only on the limestone rocks below Bristol, and according to Hudson, near Uphill, Somersetshire. Our specimens were gathered by Mr. Sowerby in the first-mentioned place, where the plant was remarked in Ray's time. It is perennial, flowering in May and June, and is remarkable among the umbelliferous tribe for having male flowers on one root and female on another.

The whole herb is smooth, and of a glaucous hue. Root tap-shaped. Male plant generally most humble in size, and less spreading. Stem in both sexes angular, branched, purplish, leafy. Leaves doubly pinnate, the leaflets nearly linear, uniform, entire, channelled. Umbels numerous, upright, simple, or compound. Flowers pale flesh-coloured, or pale buff; the males generally, but not always, without any signs of a germen; but the females are furnished with stamina, though imperfect ones. Fruit ovate, furrowed. Stigmas globular, the invariable generic character, though not sufficiently expressed in our *t.* 407 and 408.

Apium graveolens.

Sept.r 1. 1803. Published by Ja.s Sowerby, London.

APIUM graveolens.

Smallage, or Wild Celery.

PENTANDRIA Digynia.

GEN. CHAR. *Partial Invol.* none: *general* of 1 leaf. *Fruit* ovate, ribbed. *Petals* inflexed, uniform.

SPEC. CHAR. Leaflets of the stem-leaves wedge-shaped. Stem furrowed.

SYN. Apium graveolens. *Linn. Sp. Pl.* 379. *Sm. Fl. Brit.* 333. *Huds.* 129. *With.* 314. *Hull.* 64. *Relh.* 123. *Sibth.* 103. *Abbot.* 69.

A. palustre et officinarum. *Raii Syn.* 214.

TO bring under one view, as much as possible, a natural order of plants, we here exhibit another of the umbelliferous tribe, which frequently occurs in ditches and marshy places, especially near the sea, flowering in August or later. Though well known by the name of Celery in gardens, where culture renders it luxuriant, mild and wholesome, it would scarcely be recognised at the table in its slender wild form, neither would its acrid, and indeed poisonous, qualities make it welcome.

The root is biennial and tap-shaped. Stems wildly spreading or floating, long, furrowed, leafy. The whole plant is smooth, of a pale green. Leaves pinnate or ternate; the leaflets wedge- or fan-shaped, especially in the stem leaves, shining, deeply cut: those of the radical ones are generally rounder. Umbels terminal and lateral, often sessile, irregular, with a single-leaved general involucrum, which however is often wanting. Partial involucra none. Flowers small, uniform, of a pale greenish white. Fruit almost orbicular.

465.

Peplis Portula.

Sowerby del. et lith. 1803. Published by Jas Sowerby, London.

PEPLIS Portula.

Water Purslane.

HEXANDRIA Monogynia.

GEN. CHAR. *Cal.* bell-shaped, cut into 12 segments. *Petals* 6, placed on the calyx. *Caps.* superior, of 2 cells.

SPEC. CHAR. Leaves obovate. Petals often wanting.

SYN. Peplis Portula. *Linn. Sp. Pl.* 474. *Sm. Fl. Brit.* 389. *Huds.* 147. *With.* 352. *Hull.* 76. *Relh.* 141. *Sibth.* 108. *Abbot.* 78. *Curt. Lond. fasc.* 4. *t.* 27. *Dicks. H. Sicc. fasc.* 4. 8.
Portula. *Raii Syn.* 368.

FREQUENT in moist places on a gravelly or sandy soil, and about shallow pools that are dried up in summer, flowering from June to the end of August.

Root fibrous, annual. Stems several, prostrate, sometimes floating, rooting in the mud, simple or branched, square, smooth, leafy. Leaves opposite, obovate, obtuse, entire, smooth, tapering at the base into a footstalk. Flowers small, axillary, solitary, sessile, reddish. Calyx with 6 large segments, and as many small recurved ones between them. Petals small, red, scarcely projecting beyond the calyx, often wanting, and in general very fugacious. Germen globose, crowned with a short simple style and capitate stigma. Capsule thin and pellucid, containing numerous seeds, in 2 hemisphærical cells, which do not open till torn by accident.

This genus is closely allied to *Lythrum*, from which it chiefly differs in its campanulate, not tubular, calyx, and in having but half as many stamina.

Sept.r 1 1803 Published by Jas Sowerby London.

CHERLERIA sedoides.

Dwarf Cherleria.

DECANDRIA Trigynia.

GEN. CHAR. *Cal.* of 5 leaves. *Petals* none? *Nectariferous glands* 5, cloven, at the base of the stamina. *Capsule* superior, with 3 valves, 1 cell, and many seeds.

SPEC. CHAR. . . . . .

SYN. Cherleria sedoides. *Linn. Sp. Pl.* 608. *Sm. Fl. Brit.* 483. *Huds.* 193. *With.* 424. *Hull.* 98. *Lightf.* 232. *Dicks. H. Sicc. fasc.* 1. 9.

Cherleria. *Hall. Hist. v.* 1. 381. *t.* 21. *Seguier. Veron. suppl.* 180. *t.* 4. *f.* 3.

RAY and Dillenius were not acquainted with this little plant as of British growth, though described from exotic specimens by Plukenet, and others of his time. The first correct accounts of it were given by Haller and Seguier, and it was afterwards discovered in Scotland by some of Dr. Hope's travelling pupils. It is only found about the summits of the highland mountains, in boggy spots, flowering in July, and is perennial. We received specimens from the late Mr. Mackay.

The branching leafy stems form dense moss-like tufts, of a light green, about an inch high. Leaves rather fleshy, triangular, blunt, smooth, with 3 ribs beneath. Flowers yellowish-green, solitary on short simple stalks about the summit of the stem, with a pair of bracteæ to each. Calyx in 5 spreading obtuse segments. Stamina spreading with the calyx, those 5 which are opposite to its leaves having each a cloven gland between them and the germen. Capsule ovate, of one cell, containing many angular seeds.

Seguier contends for the existence of 5 entire petals, alternate with the calyx-lobes, which, if constant, would almost reduce the plant to an *Arenaria*. We have never been able to find any, nor did Haller or Linnæus.

1368.

Salix nigricans.

Sept.r 1 1803 Published by Jas Sowerby. London.

SALIX nigricans.

Dark-broad-leaved Willow.

DIOECIA Diandria.

GEN. CHAR. Male, *Cal.* the scales of a catkin. *Cor.* none. *Nectary* a gland at the base of the stamina. *Stam.* 1—5. Female, *Cal.* and *Nect.* like the male. *Cor.* none. *Stigmas* 2. *Caps.* superior, of 1 cell and 2 valves. *Seeds* downy.

SPEC. CHAR. Leaves elliptic-lanceolate, crenate, smooth; glaucous beneath. Germen lanceolate, acute, silky, stalked.

SYN. Salix nigricans. *Tr. of Linn. Soc. v.* 6. 120. S. phylicifolia β. *Linn. Sp. Pl.* 1442. *Fl. Lapp. n.* 350. *t.* 8. *f.* c.

WE have already, at *t.* 1145, apologized for publishing but one sex in this difficult genus when we could not obtain both, as is the case with the present species, of which the male only has come under our inspection in a living state. Female specimens are indeed in the Linnean herbarium, but what is mentioned as the female in *Tr. of L. Soc. v.* 6. 121, seems on mature consideration to be possibly different.

The male *S. nigricans* has been observed by Mr. Crowe at Wrongay fen, Norfolk, and in osier grounds in many places. It flowers in April. The stem scarcely forms a tree, though it sometimes rises to 10 or 12 feet in height, with many, irregular, straightish, brittle, dark-coloured branches; the young ones downy. Leaves 3 inches long, lanceolate, somewhat elliptical, acute, scarcely rounded at the base, crenate in every part; dark-green and smooth above, turning black when dried; beneath glaucous, veiny, sometimes a little downy. Stipulæ large, obliquely cordate, serrated, smooth, veiny. Catkins yellow, about an inch or more in length, thick and obtuse, their scales obovate, narrow, brown in their upper half, hairy. Stamina 2, distinct, thicker upwards, more or less hairy below. Capsules (in the Linnean specimen) lanceolate, brown, downy, each on a little partial stalk.

Salix
stipularis.

Sept.r 1. 1809. Published by Ja.s Sowerby London.

SALIX stipularis.

Auricled Osier.

DIOECIA Diandria.

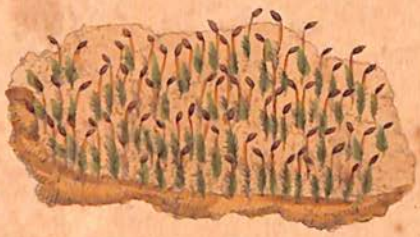
GEN. CHAR. Male, *Cal.* the scales of a catkin. *Cor.* none. *Nectary* a gland at the base of the stamina. *Stam.* 1—5. Female, *Cal.* and *Nect.* like the male. *Cor.* none. *Stigmas* 2. *Caps.* superior, of 1 cell and 2 valves. *Seeds* downy.

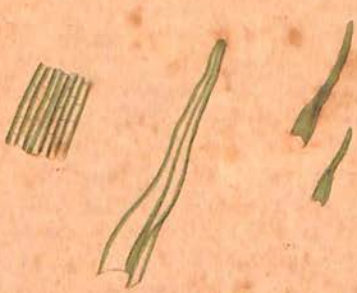
SPEC. CHAR. Leaves lanceolate, pointed, obscurely crenate; downy beneath. Stipulæ half-cordate, very large. Nectary cylindrical.

THIS new species of *Salix* was noticed by Mr. Crowe in osier grounds near Bury. Mr. Sowerby has formerly received it for *S. viminalis*, with which, however different, we presume this has been confounded. Its merits as an Osier are however so small, as to render the distinction of the two species important in an œconomical view.

It blossoms in March, being perhaps the earliest of our British species. The branches are upright, long, round, and clothed with a short soft brownish down, like velvet. Leaves on shortish stalks, nearly erect, about 5 inches long, lanceolate, pointed, rounded at the base, unequally and slightly crenate; green and smooth above; beneath downy, with a pale rib and many parallel curved veins. Stipulæ on short stalks, half-heart-shaped, long-pointed, toothed or cut at the base, often larger than in our figure. Catkins large and thick, with obovate hairy scales. Stamina 2. Nectary long, cylindrical, obtuse. Germen on a short stalk, ovate, downy. Style a little elongated. Stigmas remarkably long, awl-shaped, recurved, undivided.

The large long stigmas, slender nectary, and conspicuous stipulæ, render it impossible to confound this species with any other at all resembling it. In structure of the fructification it most resembles *S. viminalis*.





Sept.r 1. 1803. Published by Jas. Sowerby, London.

DICRANUM varium.

Variable Fork-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* oblong. *Fringe* of 16 flat, cloven teeth, a little inflexed.

SPEC. CHAR. Stem generally simple. Leaves capillary, rather leaning to one side, waved at the point. Capsule urn-shaped, drooping, tapering at the base.

SYN. Dicranum varium. *Hedw. Sp. Musc.* 133. *Crypt. v.* 2. 93. *t.* 34. *Roth. Germ. v.* 3. 170.

D. simplex. *Sibth.* 282.

Bryum simplex. *Linn. Sp. Pl.* 1587. *Huds.* 486. *With.* 800. *Hull.* 254. *Abbot.* 239. *Dicks. H. Sicc. fasc.* 14. 20, and 17. 21.

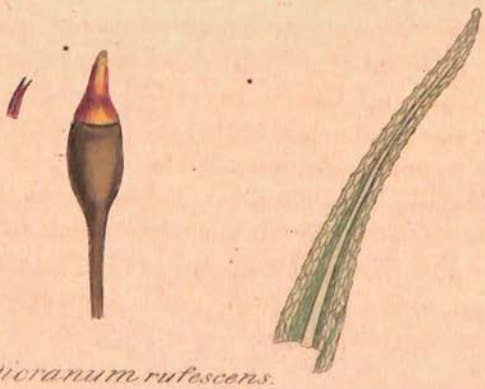
B. trichodes, capsulis rubris cernuis. *Dill. Musc.* 390. *t.* 50. *f.* 59.

Mnium simplex. *Relh.* 418.

A NATIVE of grassy sandy moist places, not of frequent occurrence, nor is it very visible to superficial observers. These specimens were gathered by Mr. Templeton, in a moist part of a field near Lambeg moors, Ireland, in February 1801.

This minute species of Fork-moss is annual, and forms large bright-green thin patches. The stem, though generally simple (whence the Linnean name), having been found by Hedwig to be often variously branched, he changed its denomination to *varium;* and we adopt it readily, as many species are more truly simple. The leaves lean more or less to one side, and are capillary, soft and flexible, not rigid; their ends obtuse; their bases dilated: under a powerful microscope they are found to be uniformly, not very evidently, reticulated, with an entire even edge. Fruit-stalk terminal, shining, reddish. Capsule club- or urn-shaped, with a spreading mouth, inclined, and at length drooping. Fringe red. Lid awl-shaped, curved, tumid at the base, scarcely shorter than the capsule. Veil conical, thin and white.

1713.



Dicranum rufescens.

Sept.r 1. 1803. Published by Jas. Sowerby. London.

DICRANUM rufescens.

Red Fork-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* oblong. *Fringe* of 16 flat, cloven teeth, a little inflexed.

SPEC. CHAR. Stem simple. Leaves tapering, flexible, leaning one way, reticulated, apparently serrated. Capsule urn-shaped, erect.

SYN. Bryum rufescens. *Dicks. Crypt. fasc.* 3. 6. *t.* 8. *f.* 1. *With.* 818. *Hull.* 258.

WHEN a student at Edinburgh in 1782, I first detected this moss, on the moist perpendicular sandy bank of a romantic rivulet at the Hermitage, a mile south of the town. The botanists of that day did not venture to determine it. We were all ignorant even of *Dicranum varium*, except from Dillenius's plate, or this might have been referred to that species. At last Mr. Dickson published the *rufescens* in his 3rd fasciculus, and Mr. G. Donn has since found it in wet fields near Forfar.

Like the foregoing this is an annual. The capsules are perfected in early spring, when the moss is observable by its red hue, in very extensive uninterrupted patches. In size it scarcely equals the last. The stem is, as far as we know, always simple. Leaves curved to one side, capillary to the naked eye; but when highly magnified their flat lanceolate form appears, and with it the curious network of their veins, which forms a marginal chain so as to make an appearance of serratures, a circumstance which alone clearly distinguishes this from the *varium*. The fruit-stalk moreover is less shining; the capsule erect, and not quite of the same figure as in that species.

1685.

Trichostomum polyphyllum

Sept 1st 1803. Published by J.E. Sowerby London.

DICRANUM polyphyllum.

Many-leaved Fork-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* oblong. *Fringe* of 16 flat, cloven teeth, a little inflexed.

SPEC. CHAR. Stem branched, fastigiate. Leaves lanceolate, curled when dry, minutely serrated towards the point. Capsule elliptical, erect.

SYN. Bryum polyphyllum. *Dicks. Crypt. fasc.* 3. 7. *With.* 825. *Hull.* 260.

B. cirratum β. *Huds.* 486.

B. cirratum, setis et capsulis brevioribus et pluribus. *Dill. Musc.* 378. *t.* 48. *f.* 41.

B. trichoides, erectis sublongis capitulis, extremitatibus per siccitatem stellatis. *Raii Syn.* 98.

GATHERED by the Rev. H. Davies and by Mr. Turner in North Wales and in Ireland. Dillenius observed it originally on Snowdon. We have found it at Hafod, Cardiganshire. It grows in the clefts of alpine shady rocks, ripening its fruit in summer and autumn, and is perennial.

Nothing can be more distinct from the real *Bryum cirratum*, which is a *Grimmia*. This is a true *Dicranum*, and of much larger size. The stems form dense elastic tufts, an inch or more in height, and are branched, very leafy, the summits of the branches all nearly level. Leaves pale yellowish green, imbricated, linear-lanceolate, acute, keeled, with one nerve; serrated towards the point. When dry they curl inward. By age they become very black, but remain on the stem. Fruit-stalks lateral, several, erect, slender, generally solitary. Capsule erect, elliptical, smooth, brown. Fringe purplish. Lid awl-shaped, straight. Veil striated, at length torn at the edge.

1640

Polytrichum nanigerum

Sept. 1. 1818. Published by Jas. Sowerby, London

POLYTRICHUM urnigerum.

Urn-headed Hair-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Outer Fringe* of 32 or 64 short incurved teeth: *inner* a flat undivided membrane. *Veil* generally double: the *outer* hairy.

SPEC. CHAR. Leaves lanceolate, finely serrated. Capsule cylindrical, erect, without a pedestal. Stem branched, fastigiate.

SYN. Polytrichum urnigerum. *Linn. Sp. Pl.* 1573. *Hedw. Sp. Musc.* 100. *t.* 22. *f.* 5—7. *Menz. Tr. of Linn. Soc. v.* 4. 81. *With.* 797. *Hull.* 248. *Lightf.* 703. *Dicks. H. Sicc. fasc.* 12. 20.

P. alpinum β. *Huds.* 471.

P. ramosum, setis ex alis urnigeris. *Dill. Musc.* 427. *t.* 55. *f.* 5.

THIS does not unfrequently occur in a dry loose soil on the mountains of Scotland and Wales. Specimens from which our figure was taken were gathered by Mr. Winch, on Gateshead Fell, near Newcastle. The fruit ripens throughout the summer.

Roots perennial. Stems much branched, forming dense even-topped tufts. Leaves sheathing, spreading, lanceolate, acute, obscurely keeled, serrated with fine sharp teeth; their colour a lightish green, turning rusty with age. Fruit-stalks solitary, an inch and half high, purple at the base, yellow above. Capsule erect, of an ovate cylindrical form, contracted just below the margin, and without a pedestal or *apophysis*. Lid convex, red at the border, with a shortish curved beak. Outer fringe of 32 teeth. Veil double; the outermost tawny.

P. alpinum differs from this in its greater size, and ovate drooping capsule supported by a pedestal.

1279
1631

Polytrichum hercynicum.

Dec.r 1. 1803. Published by Jas Sowerby. London

POLYTRICHUM hercynicum.

Incurved Hair-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Outer Fringe* of 32 or 64 short incurved teeth: *inner* a flat undivided membrane. *Veil* generally double: the *outer* hairy.

SPEC. CHAR. Leaves linear, mostly entire, incurved when dry. Capsule ovato-cylindrical, erect. Veil single, hairy when young.

SYN. Polytrichum hercynicum. *Hedw. Sp. Musc.* 94. *Crypt. v.* 1. 40. *t.* 15. *With.* 797. *Hull.* 248. Bryum incurvum. *Huds.* 479.

A RARE inhabitant of the Welch and Scottish mountains, for specimens of which we are obliged to Mr. Griffith, and to its original discoverer the Rev. H. Davies. It bears fruit in July.

Root perennial, densely woolly. Stems in tufts, from one to three quarters of an inch in height, mostly simple. Leaves dull-green, rigid, linear, channelled, rather pointed, for the most part entire, but the uppermost are sometimes serrated towards the point: all of them curl in as they lose their moisture. Fruit-stalk solitary, terminal, an inch or more in height, rigid, reddish. Capsule cylindrical, somewhat ovate, nearly erect, the orifice scarcely at all dilated. Fringe of about 32 teeth, shaped exactly as in the several species of *Polytrichum* already described, and accompanied by the inner horizontal membrane. Lid conical, with a short curved point. Veil cylindrical, at length bursting on one side, simple, smooth when arrived at maturity; but in a young state, when emerging from among the leaves, it is clothed with upright shining tawny hairs. These, though not essential, confirm the generic character of the moss before us, which is founded beyond all doubt on the peculiar construction of the fringe. The habit also is entirely that of a *Polytrichum*.

1630.

Polytrichum undulatum.

Oct. 1. 1803. Published by Jas Sowerby. London.

POLYTRICHUM undulatum.

Undulated Hair-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Outer Fringe* of 32 or 64 short incurved teeth: *inner* a flat undivided membrane. *Veil* generally double: the *outer* hairy.

SPEC. CHAR. Leaves lanceolate, serrated, crisp when dry. Capsule cylindrical, drooping. Veil rough at the point.

SYN. Polytrichum undulatum. *Hedw. Sp. Musc.* 98. *Crypt. v.* 1. 43. *t.* 16, 17. *Relh.* 416. *Sibth.* 307.

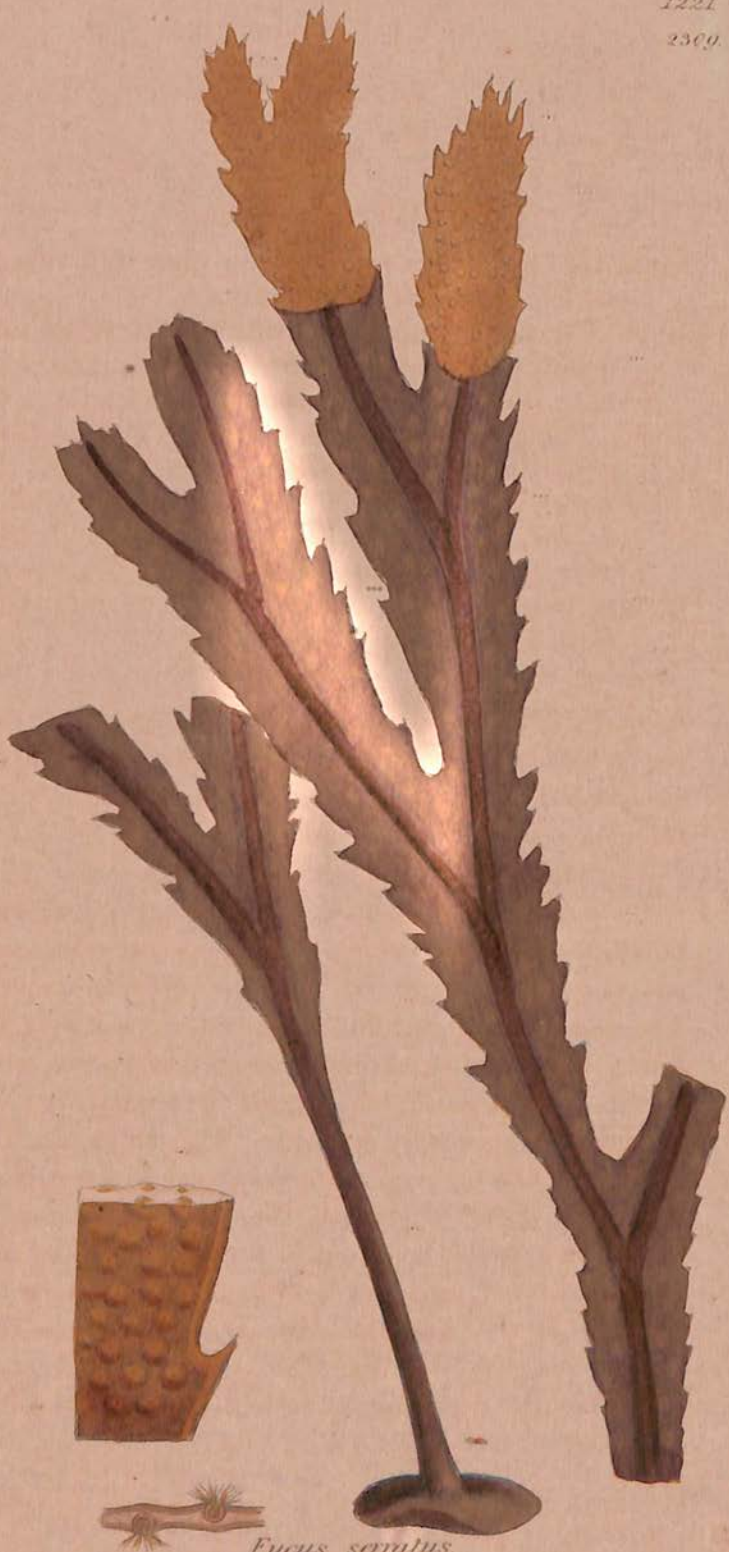
Bryum undulatum. *Linn. Sp. Pl.* 1582. *Huds.* 479. *With.* 836. *Hull.* 265. *Abbot.* 243. *Curt. Lond. fasc.* 1. *t.* 70. *Dicks. H. Sicc. fasc.* 10. 19.

B. phyllitidis folio rugoso acuto, capsulis incurvis. *Dill. Musc.* 360. *t.* 46. *f.* 18.

B. capitulis oblongis rubentibus, foliis oblongis angustis pellucidis rugosis. *Raii Syn.* 95.

FREQUENT on shady sandy banks under hedges, and in groves, ripening its capsules in February and March.

Root perennial, branched, densely woolly. Stems scattered, simple, erect, leafy, an inch or two high. Leaves bright-green, lanceolate, acute, serrated, waved, thin and pellucid, with a central rib: soon after gathering they wither and curl up, losing their original beauty. Stalk terminal, solitary, red, straight, about as long as the stem. Capsule curved and drooping, cylindrical, brown, with a thick red edge. Outer fringe of 32 narrow teeth; inner as in the foregoing. Lid hemisphærical, with a long taper beak. Veil cylindrical, brown, single, its point rough as if with the rudiments of bristles, evincing its generical affinity to the preceding. Indeed we consider the beauty of the Hedwigian principles nowhere more conspicuous than in affording certain characters by which this moss and the last are ranged under *Polytrichum*, though destitute of a really double veil. How wise is the Linnean axiom, "*Genus dabit characterem, non character genus!*"



Fucus scrulus.

FUCUS serratus.

Serrated Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond linear, with a central rib, forked, deeply and irregularly serrated: its summits cloven, flat; the barren ones obtuse; the fertile pointed.

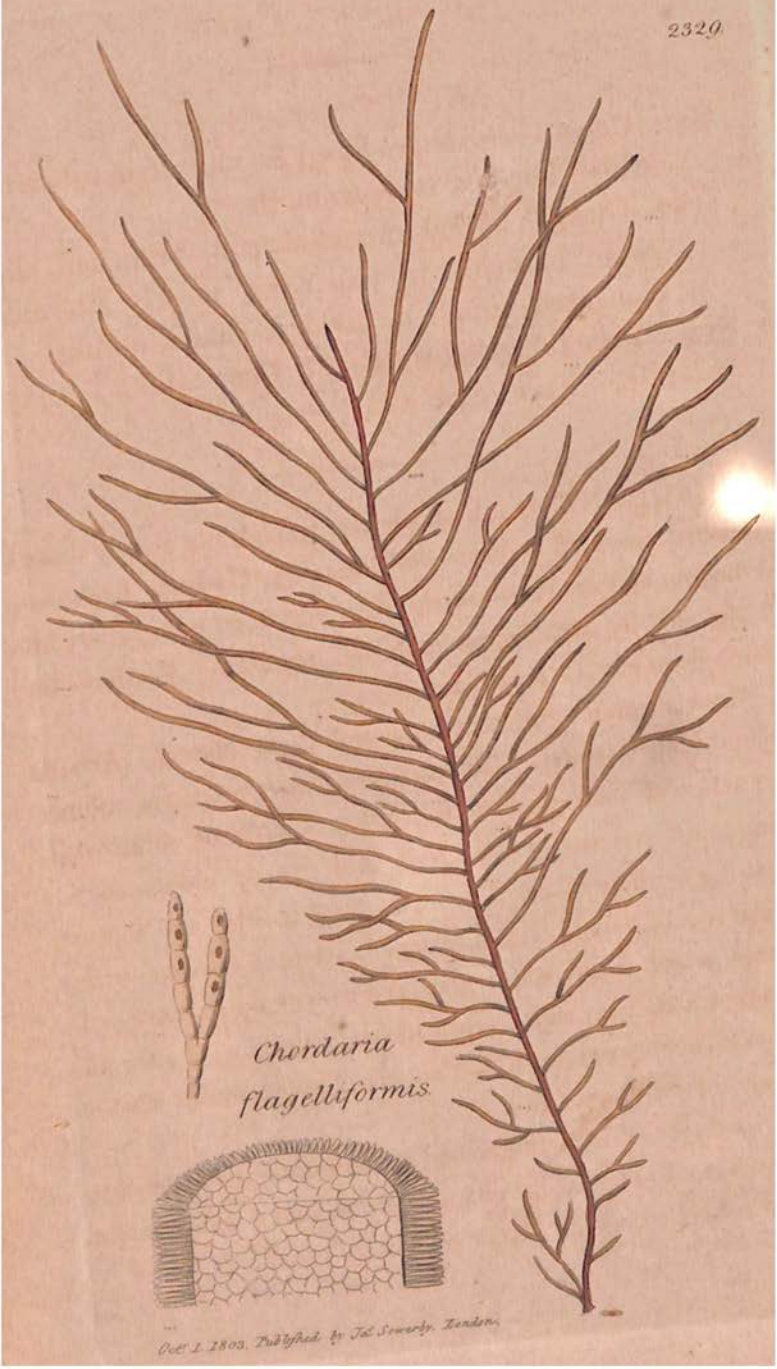
SYN. Fucus serratus. *Linn. Sp. Pl.* 1626. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 143. *Turn. Syn.* 110. *Huds.* 576. *With. v.* 4. 91. *Hull.* 319. *Lightf.* 902. *Relh.* 478. *Velley, t.* 1. *f.* a—c.

F. sive Alga latifolia major dentata. *Raii Syn.* 42.

β. Quercus marina humilis, latifoliæ serratæ similis. *Raii Syn.* 42.

COMMON everywhere on the British coast, either growing on rocks and stones, or washed up by the tide upon the sandy beach. It is perennial, and appears in fructification throughout the winter and spring.

This can be confounded with no other sea-weed. It is one of the largest species, agreeing in leathery substance, and olive-brown or black colour, with *F. nodosus*, *vesiculosus*, *canaliculatus*, *siliquosus*, *loreus*, and other perennial winter *Fuci*. The root is an expanded disk. Frond linear, repeatedly forked, from 2 to 6 feet long, having a strong central nerve, which at the base forms a naked round stem. The margin is strongly, sharply, but unequally, serrated. The extremities forked, blunt when barren, more acute when laden with fructification, which is of a dull yellow hue, slimy to the touch, and consists of an irregular congeries of capsules, imbedded in each side of the frond, rendering it twice as thick as in the barren part. Tufts of minute white fibres spring from pores scattered here and there over the frond, which Reaumur, not absurdly though erroneously, conceived to belong to the fructification.



Oct. 1. 1803. Published by Jas. Sowerby, London.

FUCUS flagelliformis.

Whip-cord Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond thread-shaped, branched, slippery: branches in two rows, mostly alternate, elongated, simple or divided, naked, obtuse.

SYN. Fucus flagelliformis. *Fl. Dan. t.* 650. *Lightf.* 928. *Turn. Syn.* 335.

FREQUENT on the sea-shores, though not clearly distinguished from *F. confervoides* either by Hudson, Lightfoot, Goodenough or Woodward. Our specimen was gathered at Falmouth by Mr. Turner and Mr. Sowerby. We have the same from Sir T. Frankland.

Root a minute tubercle, supposed to be annual. Fronds cylindrical, slender, bearing numerous alternate obtuse branches of their own figure, either simple or subdivided, sometimes repeatedly branched, and greatly elongated, all tapering at their base. The whole plant is slimy and slippery to the touch, being, as Mr. Turner observes, covered with a mucus, which in the water gives it a downy appearance. Its colour is a dull brownish olive, not very deep. The fructification is entirely unknown, so that Mr. Turner doubts whether it may not prove an *Ulva*.

F. confervoides is distinguished by its numerous short setaceous sharp branches, its purple colour, and hemisphærical lateral tubercles, which pretty constantly occur.

Oct 1. 1803. Published by Jas Sowerby, London.

ERVUM tetraspermum.

Smooth Tare.

DIADELPHIA Decandria.

GEN. CHAR. *Stigma* capitate, hairy all over.

SPEC. CHAR. Stalks two-flowered. Pods smooth, each containing several seeds.

SYN. Ervum tetraspermum. *Linn. Sp. Pl.* 1039. *Sm. Fl. Brit.* 775. *Huds.* 320. *With.* 639. *Hull.* 166. *Relh.* 282. *Sibth.* 225. *Abbot.* 159. *Curt. Lond. fasc.* 1. *t.* 55.

Cracca minor, siliquis singularibus, flosculis cærulescentibus. *Raii Syn.* 322.

IF the *Ervum hirsutum*, *t.* 970, be formidable to the farmer as a weed, on account of its extreme luxuriance and fertility, this is equally or more so; for its pods are almost as plentiful, and bear 4 seeds instead of 2.

The root is annual, and the flowers begin to appear in June. Stem branched, weak, climbing, square, hairy. Leaflets numerous, alternate, obtuse, hairy beneath, their common stalk ending in a branched tendril. Flowers in pairs on long slender axillary stalks, drooping, pale blue, veiny. Calyx hairy. Pods oblong, pendulous, smooth, containing 4 seeds, sometimes more. We have from Mr. Woodward what seems a variety with from 5 to 7 seeds in each pod, and rather larger flowers than usual. It grew on a barren gravelly soil in Huntingdonshire.

The English names of these two species of *Ervum*, Smooth Tare, and Hairy Tare, apply to the pods and not to any other parts of the plant, for the herbage is most hairy in that now before us.

Trifolium ochroleucum.

Oct 1. 1803. Published by Jas Sowerby, London.

TRIFOLIUM ochroleucum.

Sulphur-coloured Trefoil.

DIADELPHIA Decandria.

GEN. CHAR. *Flowers* more or less capitate. *Pod* scarcely longer than the calyx, never bursting, but falling off entire.

SPEC. CHAR. Flowers in a hairy head. Stem erect, downy. Lower leaflets inversely heart-shaped. Lower tooth of the calyx very long.

SYN. Trifolium ochroleucum. *Linn. Syst. Nat. ed.* 12. *v.* 3. 233. *Sm. Fl. Brit.* 784. *Huds.* 325. *With.* 653. *Hull.* 164. *Relh.* 287. *Abbot.* 162. *Curt. Lond. fasc.* 6. *t.* 49. *Mart. Fl. Rust. t.* 35. *Dicks. H. Sicc. fasc.* 3. 9.

T. pratense hirsutum majus, flore albo-sulphureo. *Raii Syn.* 328.

SENT from Clapham, Bedfordshire, by the Rev. Dr. Abbot. It is a native of dry gravelly and chalky soils among bushes, flowering in June and July, and is in no respect worthy of attention as an object of culture.

The root we believe to be perennial, and it branches at the top so as to bear several stems, each of which is erect, straight, 12 or 18 inches high, but little branched, round and hairy. Leaves remote; the uppermost only opposite. Stipulæ large, combined, clasping the stem, sharp-pointed, downy, ribbed with simple nerves. Lower foot-stalks long, bearing broad, inversely heart-shaped, entire, hairy leaflets; the upper leaflets are longer and narrower. Head of flowers terminal, solitary, stalked, erect, hemisphærical, dense. Calyx slender, furrowed, hairy, with taper teeth, of which the lowermost is about thrice as long as the rest. Petals joined at the base, narrow, of a peculiar pale buff or faint sulphur-colour, by which the species is known at once from all others of British growth.

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